Annexure 4 - Performance Indicators

								Targets			Comments on information		
Indicator short name	Category	Sub-category	Built environment function	Code	Indicator origin	Frequency of reporting	Baseline year	2013/14	2014/15	2015/16	Indicator Formula	Data Element 1	Source
Debt : Total Operating Revenue	A: Well-governed city	Financial Management	Financial Management	AO1.3.1.1	National Treasury - Section 71 reporting	Annual	see note below	74.0%	74.5%	see note below	(Debt) : ((Total operating revenue) - (Operating conditional grants))	Debt	City's financial reporting
Non-grant capital as a percentage of total capital expenditure city-wide	A: Well-governed city	Financial Management	Financial Management	AO3.7	National Treasury - Section 71 reporting	Annual	see note below	21.3%	19.6%	see note below	(Own funded capital expenditure) / (Total actual capital expenditure) x 100	Own funded capital expenditure	City's financial reporting
Capital expenditure budget implementation indicator	A: Well-governed city	Financial Management	Financial Management		National Treasury - Section 71 reporting	Annual	see note below	87.4%	80.5%	see note below	(Total actual capital expenditure) / (Budgeted capital expenditure) x 100	Total capital expenditure	City's financial reporting
Collection rate	A: Well-governed city	Financial Management	Financial Management		National Treasury - Section 71 reporting	Annual	see note below	89.6%	92.4%	see note below	((Gross Debtors Opening Balance) + (Billed Revenue) - (Gross Debtors Closing Balance) - (Bad Debts Written Off)) / (Billed Revenue) x 100	Gross Debtors Opening Balance	City's financial reporting
Net debtors days	A: Well-governed city	Financial Management	Financial Management		National Treasury - Section 71 reporting	Annual	see note below	89.3	80.3	see note below	((Gross Debtors) - (Bad Debt Provision)) / (Billed Revenue) × 365 days per year	Gross debtors	City's financial reporting
Repairs and Maintenance as a % of Property, Plant and Equipment, Investment Property	A: Well-governed city	Financial Management	Financial Management		National Treasury - Section 71 reporting	Annual	see note below	3.0%	2.9%	see note below	(Total Repairs and Maintenance Expenditure) / (Property, Plant and Equipment and Investment Property (at carrying value)) x 100	Total Repairs and Maintenance Expenditure	City's financial reporting
Own source revenue collected per high income household	A: Well-governed city	Financial Management	Financial Management		National Treasury - Section 71 reporting and StatsSA	Annual	see note below	R 177,840	R 194,459	see note below	(Total municipal own revenue) / (Number of high income households)	Total municipal own revenue	City's financial reporting
Total value of irregular, fruitless and wasteful expenditure identified by Auditor General, as a percentage of operating budget	A: Well-governed city	Financial Management	Financial Management	AI1.3.1	Office of the Auditor General	Annual	see note below	1.1%	0.4%	see note below	(Irregular, Fruitless and Wasteful and Unauthorised Expenditure) / (Total Operating Expenditure) x 100	Irregular, Fruitless and Wasteful and Unauthorised Expenditure	Office of the Auditor General
Audit Opinion by the Auditor General	A: Well-governed city	Leadership and governance	Governance and Administration	AO1.3	Office of the Auditor General	Annual	see note below	Clean	Clean	see note below	As defined by the Office of the Auditor General	Audit opinion	Office of the Auditor General
Voter turnout as a percentage of registered voters for all elections in municipal area	A: Well-governed city	Leadership and governance	Participation		Independent Electoral Commission	5 yearly reporting based on national and local government election years	see note below	see note below	see note below	see note below	(Voter turnout) / (eligible voting population)	Voter turnout	IEC
The budgeted amount of municipal capital expenditure for catalytic infrastructure projects contained in BEPP, as a percentage of the municipal capital budget	A: Well-governed city	Infrastructure finance	Project Finance	AO3.6	City / National Treasury Section 71	Annual	see note below	-	58.4%	49.9%	(Budgeted expenditure on catalytic infrastructure projects) / (Total municipal capital budget) x100	Budgeted expenditure on catalytic infrastructure projects	National Treasury - Section 71 reporting
Value of catalytic infrastructure projects as listed in the BEPP at financial closure as a % of total MTREF capex budget value	A: Well-governed city	Infrastructure delivery	Project Finance		City / National Treasury Section 71	Annual	see note below	-	55.1%	see note below	(Value of catalytic infrastructure projects at financial closure) / (total capital budget in MTREF) x100	Value of catalytic infrastructure projects at financial closure	City's financial reporting or infrastructure project office

								Targets			Comments on information		
Indicator short name	Category	Sub-category	Built environment function	Code	Indicator origin	Frequency of reporting	Baseline year	2013/14	2014/15	2015/16	Indicator Formula	Data Element 1	Source
Hectares approved for future development outside the 2015 urban edge as a percentage of Hectares allocated for future development as defined by the 2015 SDF	A: Well-governed city	Leadership and governance	Spatial Planning and Land Use Management	AI1.1.2	City land use approvals department	Annual	see note below	see note below	see note below	see note below	(Hectares approved for future development outside the 2015 urban edge) / (Total hectares allocated for future development as defined by the 2015 SDF) x100	Hectares approved for future development outside the 2015 urban edge	Land use planning department
Number of land use applications processed in integration zones as a percentage of the total number of land use applications submitted city-wide.	A: Well-governed city	Leadership and governance	Spatial Planning and Land Use Management	AI2.1a	City land use applications department	Annual	see note below	see note below	see notes *Information Available* columns	see note below	(Number of land use applications processed in integration zones) / (Total number of land use applications processed citywide) x100	Number of land use applications processed in integration zones	Land use planning department
Number of building plan applications processed in integration zones as a percentage of the total number of building plan applications city-wide	A: Well-governed city	Leadership and governance	Spatial Planning and Land Use Management	AI2.2a	City building plan applications department	Annual	see note below	see note below	see note below	see note below	(Number of building plan applications processed in integration zones) / (Total number of building plan applications processed citywide) x100	Number of building plan applications processed in integration zones	Building plan department
Area of vacant developable erven in integration zones as a percentage of area of vacant developable erven city wide.	A: Well-governed city	Leadership and governance	Spatial Planning and Land Use Management	AO2.3	City spatial planning	Every three years	see note below	see note below	see note below	see note below	(Hectares of vacant developable erven in integration zones) / (hectares of vacant developable erven city wide) x100	Hectares of vacant developable erven in integration zones	City
Percentage change in the value of privately owned buildings completed in Integration Zones	A: Well-governed city	Infrastructure finance	Spatial Planning and Land Use Management	AO3.5	City	Every three years	see note below	info not available yet	info not available yet	see note below	(((Value of privately owned buildings in integration zones on year 3) - (Value of privately owned buildings in integration zones in year 1)) / (Value of privately owned buildings in integration zones on year 1)) x100	Value of privately owned buildings in integration zones on year 3	City valuation roll
Percentage of city-wide population within a 10 km of a local library	B: Inclusive city	Mobility	Community Facilities	BO2.4a	City GIS and Stats SA	Every three years	see note below	see note below	see note below	see note below	(Number of households within 10km of a local library) x (average number of people per household) / (Total population of city) x100	Number of households within 10km of a local library	City GIS
Percentage of city-wide population within a 5 km of a clinic	B: Inclusive city	Mobility	Community Facilities	BO2.4b	City GIS and Stats SA	Every three years	see note below	see note below	see note below	see note below	(Number of households within 5km of a clinic) x (average number of people per household) / (Total population of city) x100	Number of households within 5km of a clinic	City GIS
Percentage of city-wide population within a 5 km of a primary school	B: Inclusive city	Mobility	Community Facilities	BO2.4c	City GIS and Stats SA	Every three years	see note below	see note below	see note below	see note below	(Number of households within 5km of a primary school) x (average number of people per household) / (Total population of city) x100	Number of households within 5km of a primary school	City GIS
Percentage of city-wide population within a 15 km of a Thusong service centre	B: Inclusive city	Mobility	Community Facilities	BO2.4d	City GIS and Stats SA	Every three years	see note below	see note below	see note below	see note below	(Number of households within 15km of a Thusong service centre) x (average number of people per household) / (Total population of city) x100	Number of households within 15km of a Thusong service centre	City GIS
Percentage of city-wide population within a 5 km of an Early Child Development centre	B: Inclusive city	Mobility	Community Facilities	BO2.4e	City GIS and Stats SA	Every three years	see note below	see note below	see note below	see note below	(Number of households within 5km of an Early Childhood Development centre) x (average number of people per household) / (Total population of city) x100	Number of households within 5km of an Early Childhood Development centre	City GIS
Percentage of city-wide population within a 5 km of a secondary school	B: Inclusive city	Mobility	Community Facilities	BO2.4f	City GIS and Stats SA	Every three years	see note below	see note below	see note below	see note below	(Number of households within 5km of a secondary school) x (average number of people per household) / (Total population of city) x100	Number of households within 5km of a secondary school	City GIS
Percentage of city-wide population within a 30 km of district hospital.	B: Inclusive city	Mobility	Community Facilities	BO2.4g	City GIS and Stats SA	Every three years	see note below	see note below	see note below	see note below	(Number of households within 30km of a district hospital) x (average number of people per household) / (Total population of city) x100	Number of households within 30km of a district hospital	City GIS

								Targets			Comments on information		
Indicator short name	Category	Sub-category	Built environment function	Code	Indicator origin	Frequency of reporting	Baseline year	2013/14	2014/15	2015/16	Indicator Formula	Data Element 1	Source
Informal dwellings in integration zones that have been upgraded, as a percentage of all informal dwellings in integration zones.	B: Inclusive city	Diversity	Housing	BO1.10	City and Department of Human Settlements	Annual	see note below	see note below	see note below	see note below	(Number of informal dwellings in integration zones that have been upgraded) / (Total number of informal dwellings in integration zones at start of year under investigation)	Number of informal dwellings in integration zones that have been upgraded	City and Department of Human Settlements
Ratio of housing types in integration zones	B: Inclusive city	Diversity	Housing	BO1.6a	Stats SA GHS	Annual	see note below	see note below	see note below	see note below	(Number of formal households in integration zones) : (Number of traditional households in integration zones) : (Number of informal households in integration zones) : (Number of other households in integration zones)	Number of formal households in integration zones	Stats SA GHS
Ratio of housing tenure status in integration zones	B: Inclusive city	Diversity	Housing	B.O 1.6b	Stats SA GHS	Annual	see note below	see note below	see note below	see note below	(Number of fully owned households in integration zones) : (Number of partially owned households in integration zones) : (Number of rented households in integration zones) : (Number of households with other tenure arrangements in integration zones)	Number of fully owned households in integration zones	Stats SA GHS
New subsidised units developed in Brownfields developments as a percentage of all new subsidised units city-wide	B: Inclusive city	Diversity	Housing	BI1.2	City and Department of Human Settlements	Annual	see note below	see note below	see note below	see note below	(Number of new subsidised housing units in brownfields development) / (Total number of newly provided subsidised housing units city-wide) x100	Number of new subsidised housing units in brownfields development	City / Department of Human Settlements
Gross residential unit density per hectare within integration zones	B: Inclusive city	Diversity	Spatial Planning and Land Use Management	BO1.4	City GIS	Every three years	see note below	see note below	see note below	see note below	(Number of households in integration zones) : (area of integration zones (hectares))	Number of households in integration zones	City GIS
Ratio of land use types (residential, commercial, retail, industrial) in integration zones	B: Inclusive city	Diversity	Spatial Planning and Land Use Management	BI2.7	City land use planning	Every three years	see note below	see note below	see note below	see note below	(Number of households) : (GLA of commercial space) : (GLA of retail space) : (GLA of industrial space)	Number of households in integration zones	City GIS
Capital expenditure on integrated public transport networks as a percentage of the municipal capital expenditure	B: Inclusive city	Mobility	Transport		National Treasury - Section 71 reporting	Annual	see note below	8.8%	11.3%	see note below	(Capital expenditure on integrated public transport networks) / (Total actual capital expenditure) x100	Capital expenditure on integrated public transport networks	City's financial reporting
Number of all dwelling units within Integration Zones that are within 500 metres of access points to the integrated public transport system as a percentage of all dwelling units within Integration Zones	B: Inclusive city	Mobility	Transport	BO2.1	City GIS	Every three years	see note below	see note below	see note below	see note below	Number of all dwelling units within Integration Zones that are within 500 metres of access points to the integrated public transport system) / (Number of dwelling units within Integration Zones) x100	Number of all dwelling units within Integration Zones that are within 500 metres of access points to the integrated public transport system	City
Percentage share of household income spent on transport costs for different household income quintiles city-wide	B: Inclusive city	Mobility	Transport	BO2.2	Stats SA GHS	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	(Household income spent on transport in quintile 1) / (Household income in quintile 1) : (Household income spent on transport in quintile 2) / (Household income in quintile 2) : (Household income spent on transport in quintile 3) / (Household income in quintile 3) : (Household income spent on transport in quintile 4) / (Household income in quintile 4) : (Household income spent on transport in quintile 5) / (Household income in quintile 5)	Average household income spent on transport in quintile 'n'	Stats SA GHS
Average weekday peak hour commuting time of passengers via the public transport system city-wide	B: Inclusive city	Mobility	Transport	BO2.3a	Stats SA GHS	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	Average weekday peak hour commuting time via public transport)	Average weekday peak hour commuting time via public transport	Stats SA GHS

								Targets			Comments on information		
Indicator short name	**Category**	**Sub-category**	**Built environment function**	**Code**	**Indicator origin**	**Frequency of reporting**	**Baseline year**	**2013/14**	**2014/15**	**2015/16**	**Indicator Formula**	**Data Element 1**	**Source**
Percentage of commuters (city-wide) using private motorised transport	B: Inclusive city	Mobility	Transport	BO2.5	Stats SA GHS	Annual	see note below	32%	no information available	see note below	(Number of commuters using private transport) / (Total number of commuters city-wide) x100	Number of commuters using private motorised transport	City transport model calibrated to travel survey
Percentage of all passenger trips that use the same ticketing system	B: Inclusive city	Mobility	Transport	BO2.7	City transport authority or department	Annual	see note below	no information available	no information available	see note below	(Number of public transport passenger trips that use the same ticketing system) / (Total number of passenger trips) x100	Number of public transport passenger trips that use the same ticketing system	City transport authority/ department
Number of reported accidents involving cyclists and pedestrians city-wide per 100 000 population	B: Inclusive city	Mobility	Transport	BO2.9	Stats SA / SAPS	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	(Number of reported accidents involving cyclists and pedestrians city-wide) / (Total population) / (100 000)	Number of reported accidents involving cyclists and pedestrians city-wide	SAPS
Average weekday peak hour commuting time of passengers from home to work or educational institution	B: Inclusive city	Mobility	Transport	BO2.3b	Stats SA GHS	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	(Average weekday peak hour commuting time from home to work or educational institution by all modes)	Average weekday peak hour commuting time from home to work or educational institution by all modes	Stats SA
Productive GVA of the single metro as a percentage of national productive GVA	C: Productive cities	Growing city economies	Economic Development	CO1.1	City / Agency / Stats SA	Annual	see note below	6.1%	6.3%	see note below	(Productive GVA of metro) / (National productive GVA) x100	Productive GVA of metro	City / Agency / Stats SA
Productive GVA for a single metro per economically active person as a % of the national productive GVA per economically active person.	C: Productive cities	Growing city economies	Economic Development	CO1.2	Agency / Stats SA	Annual	see note below	info not available yet	info not available yet	see note below	((Productive GVA of metro) / (Number of economically active people)) / ((Productive GVA of country) / (Number of economically active people country-wide)) x100	Productive GVA of metro	City / Agency / Stats SA
Commercial and industrial rateable value for a single metro as a percentage of commercial and industrial rateable value of all metros.	C: Productive cities	Increasing city productivity	Economic Development	CO1.3	Cities' valuation departments	Annual	see note below	info not available yet	info not available yet	see note below	((Commercial rateable value of metro) + (Industrial rateable value of metro)) / ((Commercial rateable value for all metros) + (Industrial rateable value for all metros)) x100	Commercial rateable value of metro	City valuation roll
Commercial and industrial rateable value within integration zone for a single metro as a % of overall commercial and industrial rateable value for that same metro.	C: Productive cities	Increasing city productivity	Economic Development	CO1.4	City valuation department	Annual	see note below	info not available yet	info not available yet	see note below	((Commercial rateable value of land in integration zone in metro) + (Industrial rateable value of land in integration zone in metro)) / ((Commercial rateable value of land in metro) + (Industrial rateable value of land in metro)) x100	Commercial rateable value of land in integration zone in metro	City valuation roll
Megawatt hours of electricity consumed as a percentage of GVA for single metro as a percentage of the corresponding ratio for all metros	C: Productive cities	Decoupling of non-renewable energy inputs from economic growth	Economic Development	CO1.15	Cities' electricity departments / Eskom / Agency	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	((Megawatt hours of electricity sold city-wide) / (Productive GVA of metro)) / Σ((Megawatt hours of electricity sold city-wide for city 'n') / (productive GVA of city 'n')) x100	Megawatt hours of electricity sold city-wide	City electricity department / Eskom

								Targets			Comments on information		
Indicator short name	**Category**	**Sub-category**	**Built environment function**	**Code**	**Indicator origin**	**Frequency of reporting**	**Baseline year**	**2013/14**	**2014/15**	**2015/16**	**Indicator Formula**	**Data Element 1**	**Source**
Megalitres of bulk water supplied as a percentage of GVA for single metro as a percentage of the corresponding ratio for all metros	C: Productive cities	Decoupling water inputs from economic growth	Economic Development	CO1.16	Department of Water and Sanitation / City water department / Water Board / Agency	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	((Megalitres of water purchased from bulk supplier) / (Productive GVA of metro)) / Σ((Megalitres of water purchased from bulk supplier for city 'n') / (Productive GVA of city 'n')) x100	Megalitres of water purchased from bulk supplier	Department of Water and Sanitation / City water department / Water Board / Agency
Tons of solid waste to landfill as a percentage of GVA for single metro as a percentage of the corresponding ratio for all metros	C: Productive cities	Decoupling solid waste outputs from economic growth	Economic Development	CO1.17	City solid waste department / Agency	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	((Tons of solid waste to landfill city-wide) / (Productive GVA of metro)) / Σ((Tons of solid waste to landfill city-wide for city 'n') / (productive GVA of city 'n')) x100	Tons of solid waste to landfill city-wide	City solid waste department
Energy consumed by municipal buildings and municipal fleet	D: Environmentally sustainable city	Climate Mitigation and Climate Adaption	Electricity/energy	DO2.1	City energy, city electricity or climate change department	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	(Electrical energy (TJ) consumed by municipal buildings) + (Energy (TJ) consumed by municipal fleet)	Electrical energy consumed by municipal buildings	City electricity department / City climate change department
Annual amount of electricity bought from renewable sources as a percentage of all electricity bought	D: Environmentally sustainable city	Climate Mitigation and Climate Adaption	Electricity/energy	DO2.1.3	City electricity or climate change department	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	(Energy bought from renewable sources in kWh) / (Total energy bought city-wide in kWh) x100	Electricity bought from renewable sources by municipality	City electricity department
Number of Solar Water Heater subsidies paid out	D: Environmentally sustainable city	Climate Mitigation and Climate Adaption	Electricity/energy	DO2.1.5	City energy department or project management office	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	Number of Solar Water Heater subsidies paid out	Number of Solar Water Heater subsidies paid out	City energy department or project management office
Non-revenue electricity as a percentage of electricity purchased	D: Environmentally sustainable city	Resource efficiency	Electricity/energy	DO3.6	National Treasury - Section 71 reporting	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	((Number of Electricity Units Purchased and / or Generated) - (Number of Electricity Units Sold)) / (Number of Electricity Units Purchased and / or Generated) x100	Number of Electricity Units Purchased and / or Generated	City electricity department
Tonnes of domestic waste sent to landfill per capita	D: Environmentally sustainable city	Resource efficiency	Solid Waste	DO3.7a	City solid waste department	Annual	see note below	see notes *Information Available* columns	0.1115	see note below	(Tons of waste to landfill city-wide from domestic sources) / (City population)	Tons of waste to landfill city-wide from domestic sources	City solid waste department (Data 2015)

								Targets			Comments on information		
Indicator short name	**Category**	**Sub-category**	**Built environment function**	**Code**	**Indicator origin**	**Frequency of reporting**	**Baseline year**	**2013/14**	**2014/15**	**2015/16**	**Indicator Formula**	**Data Element 1**	**Source**
Tonnes of commercial and industrial waste sent to landfill per GLA of commercial and industrial property	D: Environmentally sustainable city	Resource efficiency	Solid Waste	DO3.7b	City solid waste department / city land use planning department	Annual	see note below	see notes *Information Available* columns	see notes *Information Available* columns	see note below	((Tons of commercial waste to landfill city-wide) + (Tons of industrial waste to landfill city-wide)) / ((GLA of commercial space city-wide) + (GLA of industrial space city-wide))	Tons of waste to landfill city-wide from commercial sources	City solid waste department
Green drop score for municipality	D: Environmentally sustainable city	Resource efficiency	Water & Sanitation	DO3.1	Department of Water and Sanitation	Every two years	see note below	see notes *Information Available* columns	79.90%	-	As per DWS Green Drop	Green drop score for municipality	Department of Water and Sanitation
Blue drop score for the municipality	D: Environmentally sustainable city	Resource efficiency	Water & Sanitation	DO3.3	Department of Water and Sanitation	Every two years	see note below	see notes *Information Available* columns	96.62%	-	As per DWS Blue Drop	Blue drop score for the municipality	Department of Water and Sanitation
Percentage of non-revenue water produced	D: Environmentally sustainable city	Resource efficiency	Water & Sanitation	DO3.4	Department of Water and Sanitation	Annual	see note below	see notes *Information Available* columns	32%	see note below	((Number of Kilolitres Water Purchased or Purified) - (Number of Kilolitres Water Sold)) / (Number of Kilolitres Water Purchased or Purified) ×100	Number of Kilolitres Water Purchased or Purified	Department of Water and Sanitation / City water department / Water Board / Agency

Note:
The Metro is still in the process of developing its baselines for the various perofrmance indicators. It is expected that the baseline values will therefore be relfected in the next BEPP cycle.
The 2014-2015 values have been populated based on available actual resuts and data. 2016 values will be updated in the next BEPP cyle with the actual yearend results, and forecasted amounts for 2017 forward will also be included.

Annexure 5 – Strategic Review of the Built Environment Infrastructure

SECTION B

SECTION B: STRATEGIC REVIEW OF THE BUILT ENVIRONMENT

The following section provide a strategic overview of the Built Environment of Ekurhuleni.

B.1 CURRENT PERFORMANCE OF THE BUILT ENVIRONMENT[1]

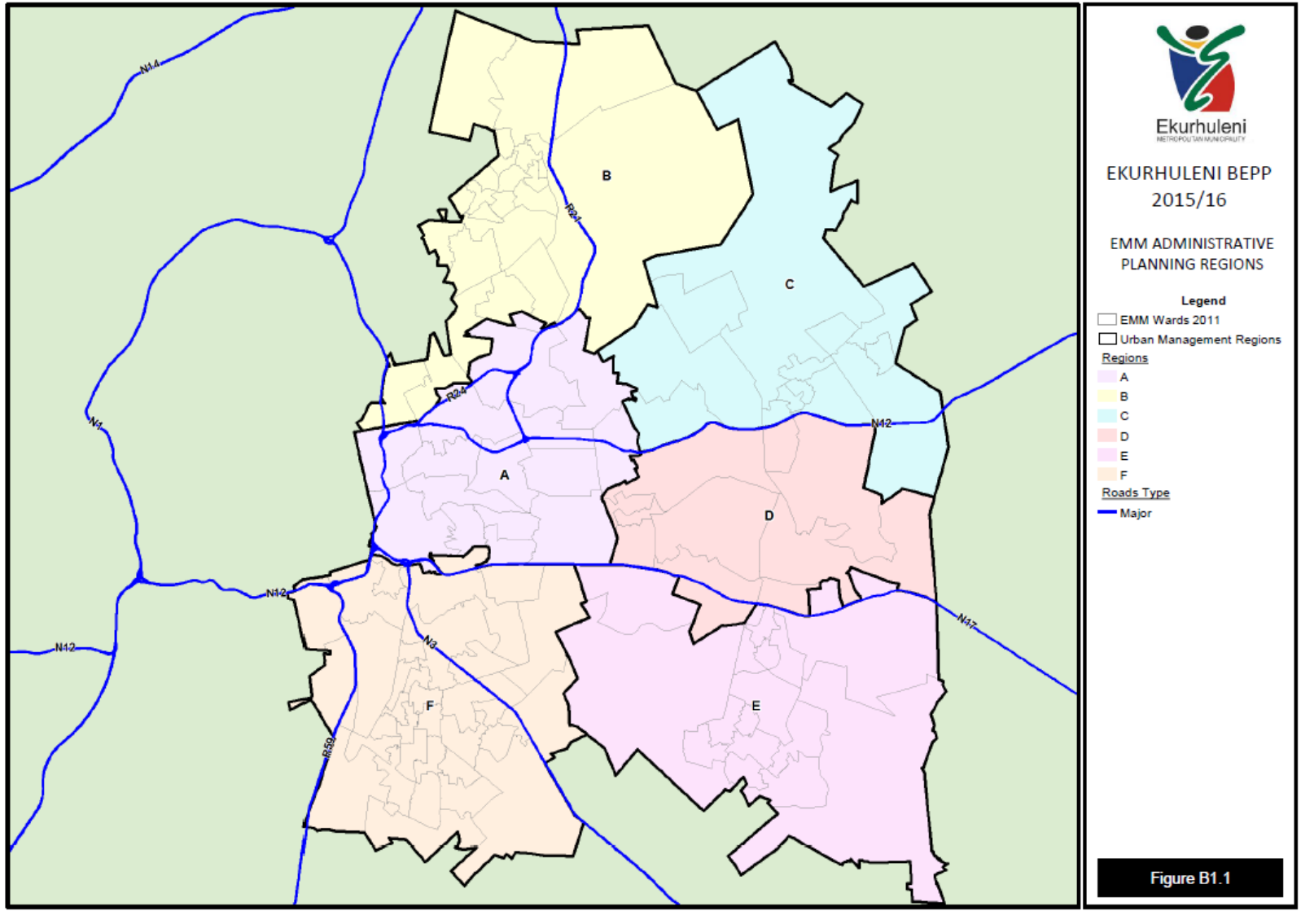
As indicated within the Ekurhuleni MSDF, the EMM has a total surface area of approximately 2000km² that accommodates a population of 3.2 million in 2012. Ekurhuleni is spread over 15.6% of Gauteng's land mass, accommodates 6.1% of the country's population (2012). Migration into the area is a key challenge. This is visible in the number of informal settlements and informal trading activity. The EMM has approximately 1.1 million households which is likely to increase when taking migration into account.

The economically active population segment of Ekurhuleni constitute 41.5% of the total population. The area contributes approximately 6.1% to the national production and over the time period 1996 to 2011, Ekurhuleni's economy grew by an estimated average of 3.2% per annum. Although the economy grew steadily, unemployment within the EMM is concerning, with a rate as high as 30% (IHS Global Insight).

The Ekurhuleni Metropolitan Municipal area is divided into six (6) planning regions, as indicated in **Figure B1.1.**

[1] Final comments from the EMM Spatial Planning Division is still outstanding.

Figure B1.1 EMM Administrative Planning Regions



GROWTH TRENDS AND PRESSURES

➢ POPULATION GROWTH TRENDS AND PRESSURES

Growth Trends: From the incremental population projections for 2011-2037, it is evident that approximately ***2 202 million*** additional people are expected within the Ekurhuleni Metropolitan Municipality by 2037. This represents about **28%** of the total incremental population of the Gauteng Province up to 2037. The future population growth is calculated at approximately 2.7% per annum between 2001 and 2025, decreasing to 1.3% per annum between 2025 and 2037. **Table B1.1** indicates the incremental population projected for 2011-2037 and T**able B1.2** indicated the anticipated growth rate per annum for 2011-2037.

Table B1.1: Incremental Population, 2011-2037

MUNICIPALITY	Census		PROJECTION		INCREMENT		
	2001	2011	2025	2037 SDF Base	2011-2025	2025-2037	Total 2011-2037
CITY OF TSHWANE MM	2,145,861	2,920,560	3,834,825	4,366,849	914,265	532,023	1,446,289
CITY OF JOBURG MM	3,225,772	4,437,917	5,954,712	6,735,681	1,516,796	780,968	2,297,764
EKURHULENI MM	2,478,132	3,175,873	4,610,716	5,378,723	1,434,843	768,007	2,202,850
SEDIBENG DM	796,756	916,383	1,182,496	1,276,630	266,113	94,134	360,247
WEST RAND DM	744,159	820,208	1,207,543	1,370,292	387,334	162,750	550,084
GAUTENG	**9,390,679**	**12,270,941**	**16,790,292**	**19,128,174**	**4,519,351**	**2,337,882**	**6,857,233**

Table B1.2: Growth Rate per Annum, 2011-2037

MUNICIPALITY	GROWTH PER ANNUM (%)		
	2001 - 2011	2011-2025	2025-2037
CITY OF TSHWANE MM	3.1%	2.0%	1.1%
CITY OF JOBURG MM	3.2%	2.1%	1.0%
EKURHULENI MM	2.5%	2.7%	1.3%
SEDIBENG DM	1.4%	1.8%	0.6%
WEST RAND DM	1.0%	2.8%	1.1%
GAUTENG	2.7%	2.3%	1.1%

Figure B1.2 graphically illustrates the spatial distribution and relative size of incremental population allocated to different parts of the Gauteng province according to GITMP S1 Scenario for the year 2037. It is evident that the majority part of incremental population for Ekurhuleni was placed in the western parts of the metropolitan area closest to the City of Johannesburg and the OR Tambo Aerotropolis (Alberton-Katorus-Germiston-Edenvale-Tembisa-R21). Provision was also made for population growth in the eastern parts of Ekurhuleni around Springs, Nigel, Etwatwa, Daveyton, as well as the Kwatsaduza complex, although not at the same scale as in the western parts.

Figure B1.2: Incremental Formal Population - Gauteng



➢ ECONOMIC GROWTH TRENDS AND PRESSURES

Growth Trends: From the incremental formal workers projections for 2011-2037, it is evident that approximately ***1 058 million*** formal workers or job opportunities are expected within Ekurhuleni. This represents about ***25%*** of the total incremental formal workers for the Gauteng Province up to 2037. The future job opportunities growth is calculated at approximately 3.3% per annum between 2011 and 2015, slightly decreasing to 2.1% per annum between 2015 and 2037. **Table B.4** indicates the incremental formal workers projected for 2011-2037 and T**able B.5** indicated the anticipated growth rate per annum for 2011-2037.

Table B1.3: Incremental Job Opportunities, 2011-2037

MUNICIPALITY	Census		PROJECTION		INCREMENT		
	2001	2011	2025	2037 SDF Base	2011-2025	2025-2037	Total 2011-2037
CITY OF TSHWANE MM	580,231	1,007,989	1,696,921	2,169,013	688,932	472,092	1,161,024
CITY OF JOBURG MM	909,731	1,672,265	2,694,569	3,352,269	1,022,304	657,700	1,680,004
EKURHULENI MM	602,307	1,030,555	1,618,959	2,088,910	588,404	469,952	1,058,356
SEDIBENG DM	139,969	239,246	339,865	425,068	100,619	85,203	185,822
WEST RAND DM	158,321	216,507	336,926	457,217	120,419	120,291	240,710
GAUTENG	**2,390,559**	**4,166,562**	**6,687,241**	**8,492,478**	**2,520,679**	**1,805,237**	**4,325,916**

Table B1.4: Growth Rate per Annum, 2011-2037

MUNICIPALITY	GROWTH PER ANNUM (%)		
	2001 - 2011	2011-2025	2025-2037
CITY OF TSHWANE MM	5.7%	3.8%	2.1%
CITY OF JOBURG MM	6.3%	3.5%	1.8%
EKURHULENI MM	5.5%	3.3%	2.1%
SEDIBENG DM	5.5%	2.5%	1.9%
WEST RAND DM	3.2%	3.2%	2.6%
GAUTENG	5.7%	3.4%	2.0%

Based on the GITMP S1 Scenario, **Figure B1.3** and **Figure B1.4** compare the spatial distribution and size of Gauteng job opportunities in 2010 to that anticipated by 2037. It is evident from **Figure B.4** that the Aerotropolis and the R21 Corridor were allocated a significant percentage of the incremental job opportunities in the Ekurhuleni metropolitan area. The existing activity nodes in the central parts of the metropolitan area (Germiston, Boksburg, Benoni, Brakpan and Springs) also grew significantly in terms of job opportunities in support to the anticipated incremental population to be established in parts of the mining belt. In line with the objectives of the National Development Plan, substantial growth was also projected/allocated for the peripheral parts around Daveyton-Etwatwa, in Katorus, as well as in the Kwatsaduza area. A notable number of job opportunities was also allocated to the Tambo Springs, and Sentra Rand freight hubs.

Figure B1.3: Gauteng Formal Workers – 2010

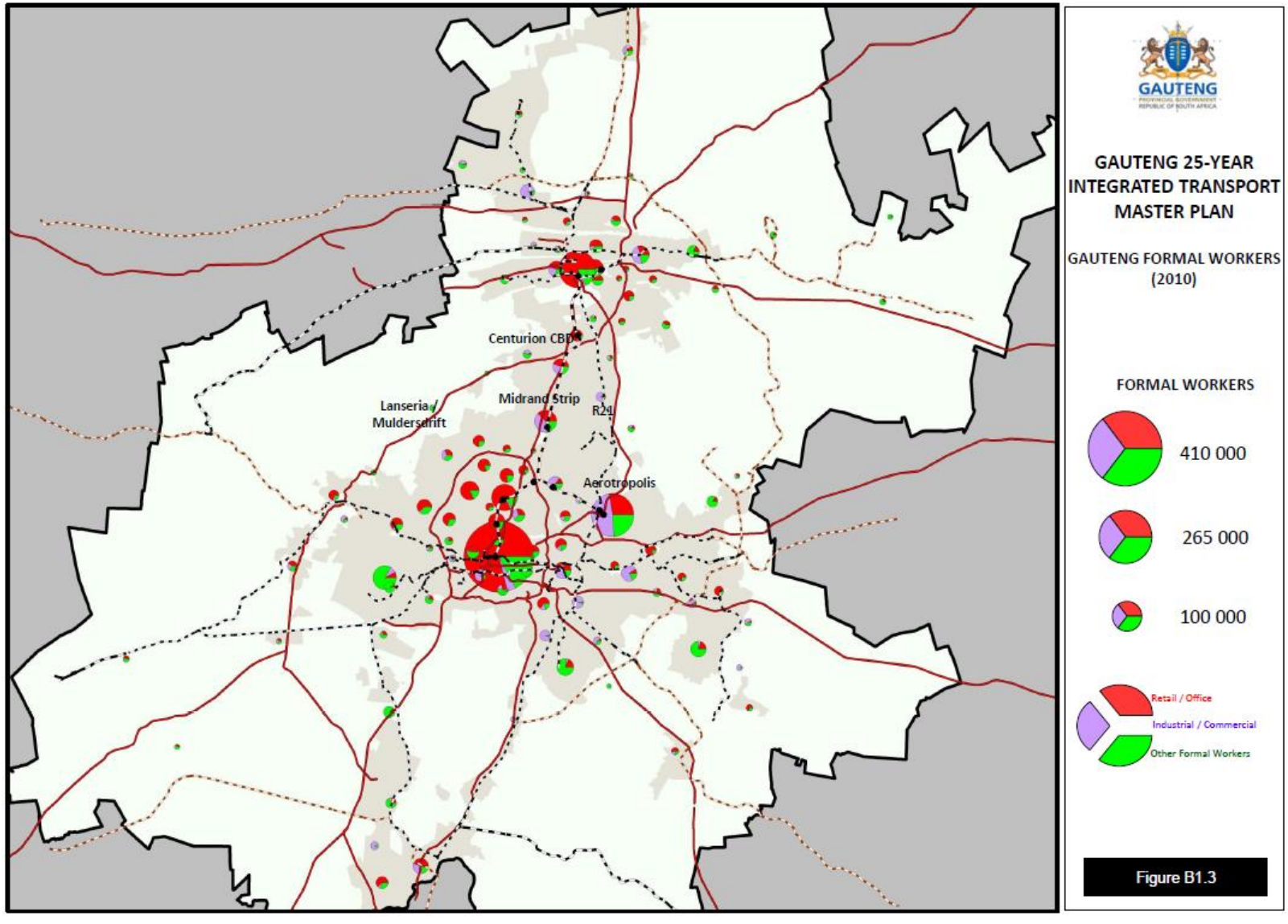
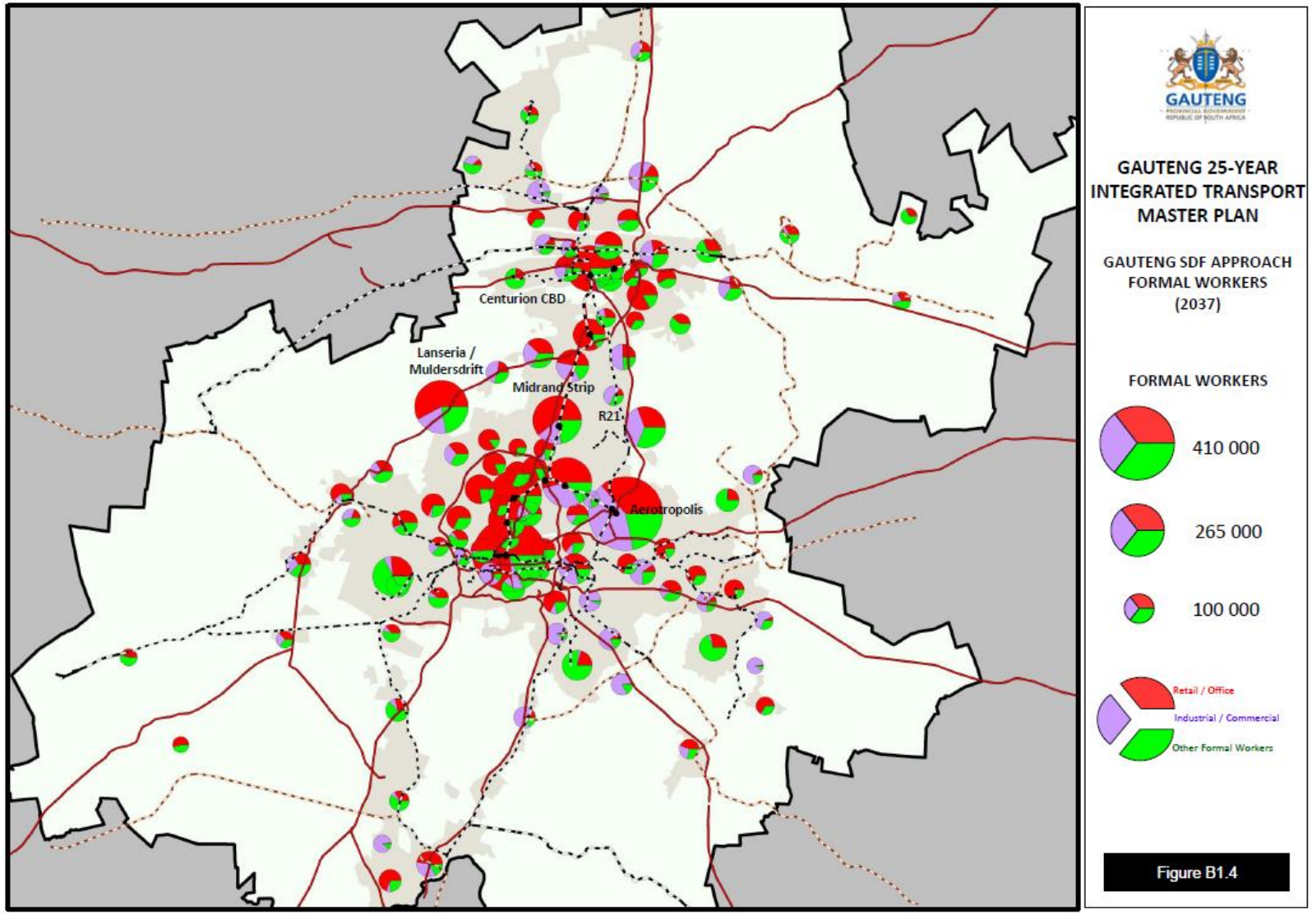


Figure B1.4: Gauteng Formal Workers – 2037



Rising Unemployment: Unemployment is a great concern, which is directly linked to the manufacturing decline within the EMM

Decline in Industrial / Manufacturing Functions: The EMM had a strong industrial base, though due to the decline in die mining industry, the industrial / manufacturing functions eroded. Large amounts of underutilised and vacant industrial land is located throughout the EMM. Well located underutilized / vacant industrial land within the urban edge should be considered for redevelopment due to urbanization pressures.

- **SPATIAL GROWTH TRENDS AND PRESSURES**

Core Development Triangle: According to the MSDF (2015), the primary focus of the EMM is to promote economic activity and future growth within the central Metropolitan Economic Activity Area. This *Core Development Triangle* holds the bulk of all job opportunities within the metro and includes the current active mines, all the major industrial areas, as well as all the major central business districts and shopping centres. The point of gravity within the Core Development Triangle is the Central Business Districts of Kempton Park, Boksburg, Germiston and Benoni. The OR Tambo International Airport and broader Aerotropolis development forms part of the *Core Development Triangle* which is a major growth point.

Main Development Corridors: There are two main development desire lines; the first being the east-west desire line between the N12 and the N17 freeways, and the second a north-south line linking the Tembisa, Kempton Park, Germiston, and Alberton areas. **Figure B1.5** schematically illustrates the *Core Development Triangle* and *Development Corridors* identified within the EMM.

EMM Blue IQ projects: There are currently two Blue IQ projects located within EMM, these include the

(1) OR Tambo International Airport Cargo Area and the
(2) Industrial Development Zone (IDZ) to promote primarily airport related manufacturing, warehousing and distribution industries.

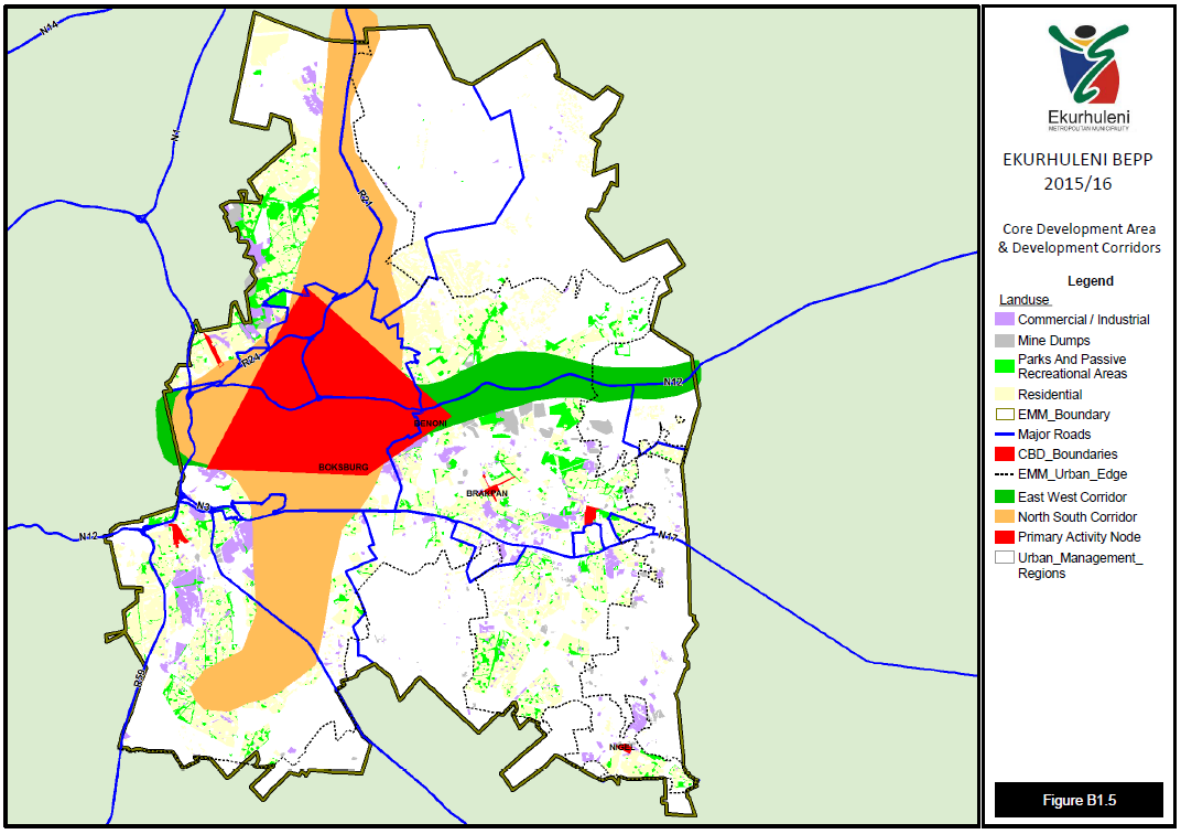
The creation of an industrial development zone adjacent to the OR Tambo International Airport will contribute to the competitiveness and growth of the manufacturing sector in Gauteng by lowering the input costs and improving the supply chain efficiencies for firms in the IDZ. Future manufacturing and related development should therefore be focused within these zones.

Aerotropolis: The Aerotropolis around ORTIA is listed as one of the major components of SIP 2. The Aerotropolis will contribute to the establishment of a new metropolitan hub which will:

- Address the issues within Ekurhuleni relating to aged urban nodes and unequal access to opportunities;
- Strengthen the identity of the EMM by claiming and promoting ORTIA as its own;

- Broaden the economic base and will strengthen and support additional industrial developments within the region.
- Provide a central point of intermodality between road, rail and air transport.

Figure B1.5: EMM Core Development Triangle and Development Corridors



Disadvantaged Communities: The MSDF acknowledges the four main disadvantaged communities of Kathorus, Tembisa, Daveyton-Etwatwa and Kwatsaduza, located outside of the *Core Development Triangle* and the importance of establishing linkages with these communities.

Enforcement of the Urban Edge: Due to the stricter enforcement of the Urban Edge and the current urbanization trend within the EMM, pressure on land available for development within the urban edge is significant, redevelopment is strongly encouraged.

Degradation of CBD's: All CBD's within the EMM are is a state of degradation and in need to be redefined and regenerated.

Limited Public Transport: Access to the CBD's and other activity nodes via a public transport system is problematic, as currently an integrated public transport system is lacking, especially in terms of providing access to the four main disadvantaged communities of Kathorus, Tembisa, Daveyton-Etwatwa and Kwatsaduza.

IMPEDIMENTS TO GROWTH AND DEVELOPMENT

Following from the identification of growth trend and pressures within the EMM, the following elements are highlighted as possible impediments to growth and development within the EMM:

- Illegal formation of informal settlements in close proximity to existing industrial activities
- Ageing infrastructure and service interruptions;
- Decaying CBDs;
- Poor tourist promotion of assets;
- Business costs of crime and violence;
- Increased unemployment; and
- Inability to provide municipal services.

CATALYTIC URBAN DEVELOPMENT PROJECTS

The identified Catalytic Urban Development Projects are the following; Flagships, Strategic Urban Developments and the Housing Catalytic Projects as identified by the EMM in terms of the BEPP process:

Table B1.5: Catalytic Urban Development Projects Summary

Flagship Catalytic Projects
1. Aerotropolis - Rhodesfield, Pomona
1.1. M&T Development Project
1.2. Riverfields Development
2. Revitalization of Township Economies - Tembisa Civic Centre Precinct
3. Revitalization of Manufacturing Sector
3.1. Tambo Springs Inland Port
3.2. Prasa Gibela Project
3.3. Lords View
4. Digital City
5. IRPTN - IRPTN Phase 1A
5.1. Strategic Land Parcels - Dries Niemandt
5.2. New Natal Spruit Hospital SLP- Phase 1C
6. Urban Regeneration – Germiston CBD / Kempton Park CBD
7. Revenue Management and Enhancement
7.1. Badenhorst Estate
7.2. Glen Gory
8. Beautification of Lakes and Dams - Germiston Lake, Boksburg Lake
9. Urban Renewal
Catalytic Housing Projects Clusters:
1. Northern Development Cluster – Clayville Ext 45, 71, Heartland / Esselen Park (Witfontein) / Esselen Park Ext 3 / Tembisa Ext 25
2. Eastern Development Cluster - John Dube 2 / Brakpan Old Location / Tskane Ext 22 / Chief Luthuli 6
3. Southern Development Cluster – Leeuwpoort / Germiston Urban Renewal housing / Zwartkoppies / Palmietfontein / Rietspruit/ Rietfontein / Palmridge 10 & 11

B.2 TRENDS AND DEMAND FOR ECONOMIC INFRASTRUCTURE[2]

This section of the Built Environment Performance Plan will review the trends and demand for economic infrastructure within the Ekurhuleni Metropolitan Municipality. As such the section focusses on the **requirements for faster and more inclusive economic growth** with an emphasis on more efficient and competitive infrastructure that promotes productive growth and results in job creation (rather than consumption only). Furthermore the section also highlights impediments to development of economic infrastructure within EMM.

The expansion of a country's economic and socio-economic infrastructure is a **pre-requisite for sustainable economic growth and development**, with government and public corporations being key players in this regard.

Significantly the expansion of both the social and economic infrastructure lies at the heart of the government's **stimulatory fiscal policy** to drive growth. It is argued that infrastructure development is an enabler of socio-economic development; it provides a framework for the governance of infrastructure development, illustrates that a renewed focus is being placed on infrastructure development in South Africa, and concludes that state capacity is a pivotal determinant of successful infrastructure development.

Given the imperative of addressing basic needs, the focus of the democratic government in the first fifteen years was to roll out social infrastructure. Consequently, the focus for the next fifteen years is to also redress economic infrastructure backlogs and inadequacies which have become a constraint to economic growth. Indeed, the National Treasury argues that "South Africa's critical infrastructure needs are in part the outcome of two decades of underinvestment, public infrastructure investment tailed off from the early 1980s. From the mid-1990s, government began to increase capital spending, with a sharp rise after 2003 as prudent management of the economy created the fiscal space for long-term investment"[3].

The National Treasury highlights the fact that while the South African state has demonstrated its ability to deliver large complex projects, many public entities fail to execute their planning mandates and spend their infrastructure budget. Hence government's capacity to plan and execute infrastructure projects looms large as a determinant of their successful implementation.

EMM needs **to invest in a strong network of economic infrastructure designed to support the country's medium to long-term economic and social objectives**. This economic infrastructure is a precondition for providing basic services such as electricity, water, sanitation, telecommunications

[2] Final comments from the EMM Economic Department is still outstanding.
[3] Source: National Treasury Budget Review, 2012

and public transport, which needs to be robust and extensive enough to meet industrial, commercial and household needs.

Large investments in economic infrastructure is required within the EMM to propel economic growth and activity. These investments need to be made in a structured and considered manner to prevent inappropriate initiatives, protect the EMM's resources and ensure prioritised investments are efficiently implemented. Priority should be given to infrastructure programmes that contribute to regional integration.

Investment in economic infrastructure within the EMM is of great importance, as there is a **direct correlation between investment in urban infrastructure** (and associated growth and expansion) **and the critical components of the national agenda** (i.e. as outlined in the NDP for example. Specifically with respect to:

- Economic growth
- Job creation
- Sustainable growth and government revenue (including property rates and taxes, company tax, personal income tax, etc.)

It is important to understand those factors (economic, demographic and related) that, on the one hand exert demand and **growth pressures** and, on the other hand, have significant potential in **creating new productive (and rateable) assets** – as opposed to meeting social needs only. To this effect an understanding of the **economy in general** and the **space economy in particular** is required.

SECTOR COMPETITIVENESS ANALYSIS

This section provides a competitive analysis of the EMM's economy, in order to identify the **key growth sectors** within the metro. The competitive analysis is based on two different methods, **labour-based** (Leading-Lagging Analysis, Carvalho Analysis and the Industry Target Classification) and **production-based** (Economic Functionality – Shift-Share Analysis), which reflects on a multitude of interrelated factors and dynamics, as outlined in the following paragraphs.

Competitive Advantage Analysis (CAA) is an assessment of the structure and performance of the economy of an area, to identify local strengths ('competitive advantages') and potential for economic infrastructure development. Actually a full competitive advantage analysis would include an examination of local infrastructure, markets, labour force, amenities, access to transportation routes, etc. The approach outlined here dos not go that far. Instead, it focusses on examining local industries / sectors to identify **leading and lagging sectors and their prospects for employment growth.**

Leading-Lagging Analysis

This analysis aims to examine the employment growth of the metro economy in terms of the aggregate economy. This analysis uses sector employment growth rates to produce two key values:

- Province Sector Relative Growth (PSRG) – Growth of the sector higher or lower than overall province growth
- Metro Sector Relative Growth (MSRG) – Growth of the sector higher or lower than the same sector on provincial level.

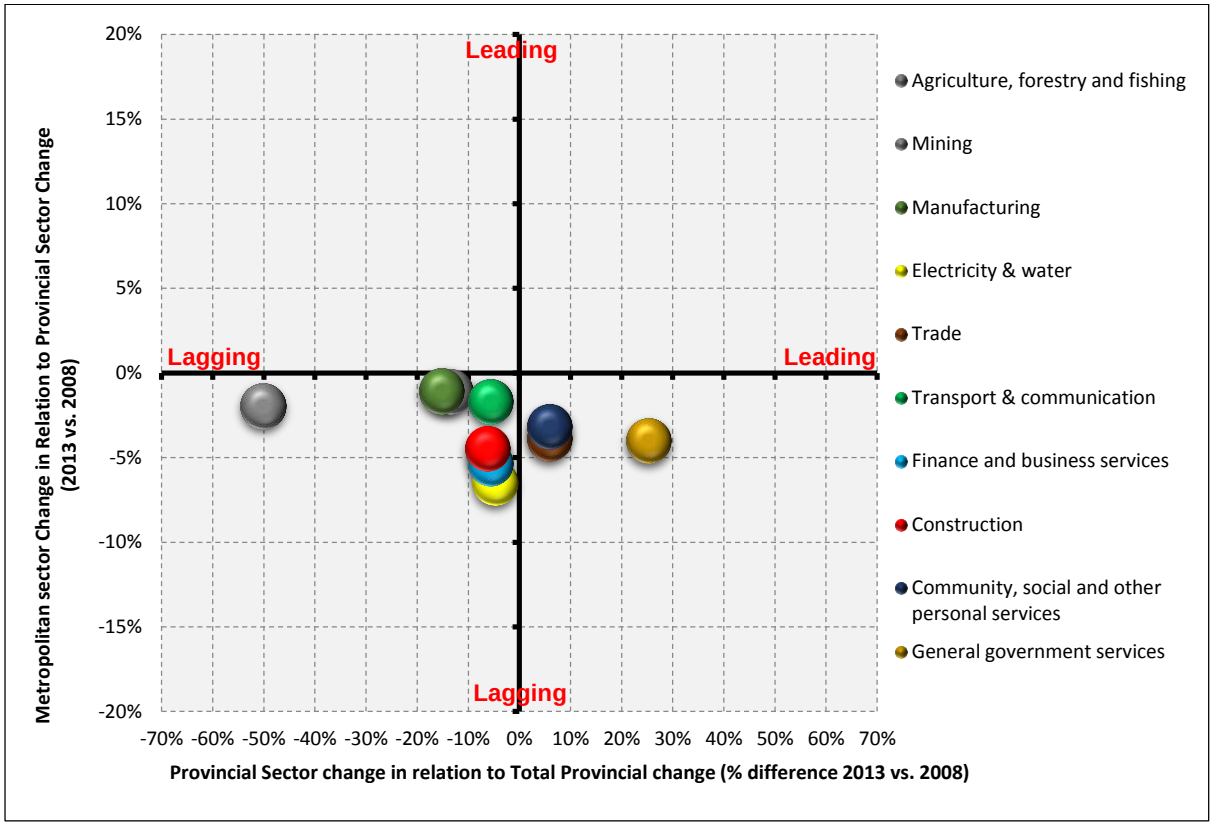
Three possible results are recorded from this analysis

- Leading – Sector exceeds growth of aggregate economy
- Lagging – Sector either declined in employment or grew at a slower rate than the aggregate economy
- Even – the sector's growth equals aggregate economy growth overall

This should be interpreted with a positive, negative or constant industry growth:
Positive Growth – Sector grew in employment
Negative Growth – Sector declined in employment
Constant Growth – Employment was constant over the time period of the analysis

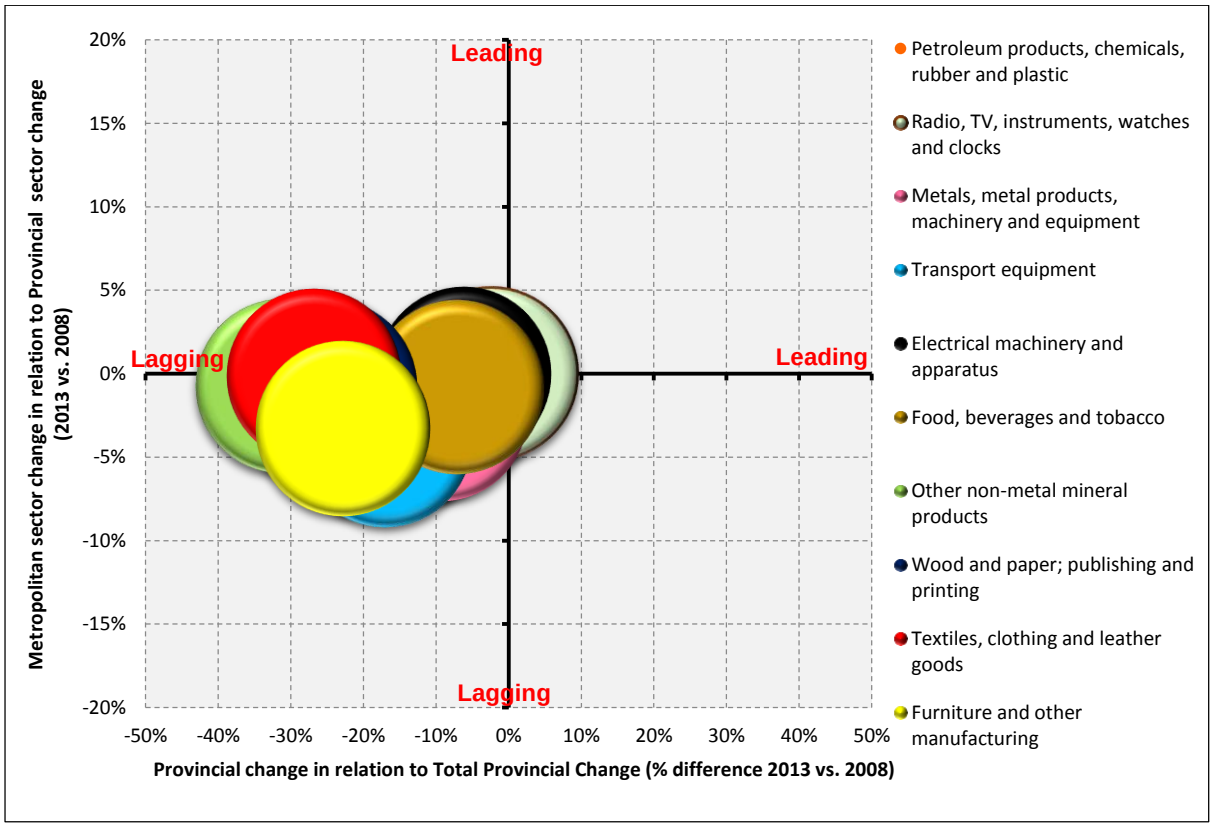
Figures B2.1 and **B2.2** illustrate the leading / lagging analysis graphically for the Metro economy's key economic sectors and the sub-sectors of the manufacturing sector.

Figure B2.1: Leading / Lagging Analysis – EMM Main Economic Sectors, 2008 to 2013



Source: Demacon, 2015

Figure B2.2: Leading / Lagging Analysis – EMM Manufacturing Sub-Sectors, 2008 to 2013



Source: Demacon, 2015

Carvalho Classification

The Carvalho Classification has been developed in 2000 by Dr Emanuel Carvalho from the University of Waterloo in collaboration with OMAFRA CED Unit staff. Three values are combined in the classification – Location Quotient, PSRG, and MSRG. It is important to note that these categories are descriptive and not prescriptive. It provides a multi-dimensional indication of the suitability of sectors, supported by tools and instruments that could be utilised in the development of these sectors.

There are 12 classifications, from 'driving' (for sectors that are leading in PSRG and MSRG and had high location quotients) to 'marginal' (for sectors that were lagging in PSRG and MSRG and had low location quotients).

Table B2.1: Classification, Interpretation and Definition

Classification	Interpretation	Definition
Driving	PSRG and MSRG leading LQ > 1.25	Community is highly specialised in this sector, which is growing in the aggregate economy and growing at an even higher rate locally
Accelerating	PSRG and MSRG leading LQ 0.75 to 1.24	Community is neither highly specialised nor under-specialised in this sector, which is growing at the aggregate economy level and growing at an even higher rate locally
Rising	PSRG and MSRG leading LQ <0.74	Relatively low proportion of local employment, but will likely increase due to growth in this sector, which is growing on an aggregate economy level and growing at an even higher rate locally
Evolving	PSRG lagging and MSRG leading LQ > 1.25	High local specialisation in a sector which grew at an aggregate economy level at a slower rate than overall growth, local growth exceeded aggregate economic growth in this sector
Transitional	PSRG lagging and MSRG leading LQ 0.75 to 1.24	Average specialisation in a sector which grew at an aggregate economy level at a slower rate than overall growth, local growth exceeded aggregate economy growth in this sector
Moderate	PSRG lagging and MSRG leading LQ <0.74	Relatively underrepresented in a sector which grew at an aggregate economy level at a slower rate than overall growth; local growth exceeded aggregate economy growth in this sector
Promising	PSRG leading and MSRG lagging LQ > 1.25	High local specialisation in a sector which grew at an aggregate economy level, local growth was slower than aggregate economic growth in this sector
Yielding	PSRG leading and MSRG lagging	Average specialisation in a sector which grew at an aggregate economic level, local growth was slower

Classification	Interpretation	Definition
	LQ 0.75 to 1.24	than aggregate economic growth in this sector
Modest	PSRG leading and MSRG lagging LQ <0.74	Relatively low specialisation in a sector which grew at an aggregate economic level; local growth was slower than aggregate economic growth in this sector
Challenging	PSRG lagging and MSRG lagging LQ > 1.25	Industries have a relatively high concentration of employment in the community, which suggests that they play a prominent role in overall employment in the community and should be monitored carefully
Vulnerable	PSRG lagging and MSRG lagging LQ 0.75 to 1.24	Industries have an average concentration of employment
Marginal	PSRG lagging and MSRG lagging LQ <0.74	Industries are under-represented in the community

Source: Demacon based on www.reddi.gov.on.ca/cea_carvalho.htm

Table B2.2: Carvalho Classification, 2008 to 2013

	Main Sectors	Sub-Sectors
Driving, accelerating and rising sectors ***Growing at local and district level***	✓ None	✓ None
Evolving, transitional and moderate sectors ***Growing faster at local than district level***	✓ None	✓ Electrical machinery and apparatus ✓ Radio, TV, instruments, watches and clocks
Promising, yielding and modest sectors ***Growing slower at local level than at district level***	✓ Wholesale and retail trade; catering and accommodation ✓ Community, social and personal service ✓ General government services	✓ Wholesale and retail trade ✓ Catering and accommodation
Challenging sectors ***High concentration of employment – however, not growing at local or district level***	✓ Manufacturing	✓ Food, beverages and tabacco ✓ Petroleum products, chemicals, rubber and plastic ✓ Other non-metal mineral products ✓ Metals, metal products, machinery and equipment ✓ Transport and storage

	Main Sectors	Sub-Sectors
Vulnerable and marginal sectors ***Relatively unrepresented in economy***	✓ Agriculture, forestry and fishing ✓ Mining and quarrying ✓ Utilities (Electricity, gas and water) ✓ Construction ✓ Transport, storage and communication ✓ Finance, insurance, real estate and business services	✓ Textiles, clothing and leather goods ✓ Wood and paper, publishing and printing ✓ Transport equipment ✓ Furniture and other manufacturing ✓ Electricity ✓ Water ✓ Communication ✓ Finance and insurance ✓ Business services

Source: Demacon, 2015

Industry Target Classification

This classification is similar to that of the Carvalho Model in that it is based on a combination of the location quotient, Provincial Employment Sector Growth (PG) and MSRG values and it is expressed qualitative not quantitative. It is somewhat different in the way that it classifies the sectors, the categories and phrases that suggest the kind of prospects for growth that could be expected and in some cases, whether the sector should be a retention target.

Table B2.3: Industry Target Classification System – Categories

LSRG	Provincial Growth	Location Quotient	Classification	Definition
Leading	Positive	Medium or High (> 0.75)	Current Strength	Sector currently growing strong
		Low (<0.75)	Emerging Strength	Indication that a sector is experiencing growth and can be classified as having definite development potential
	Negative	Medium or High (> 0.75)	Prospects limited by external trends	External trends represent a multitude of elements that strain development and growth and include competitiveness, exchange rate, fluctuations, performance of international economies, oil prices etc.
		Low (<0.75)	Prospects limited by external trends and weak base	A weak base is an indication that the sector is structurally not particularly strong and limited in its diversification. This along with external trends strain the development prospects
Lagging	Positive	Medium or High (> 0.75)	High priority retention target	Indication of a previously dominant or economically important sector that needs to retain its positive economic position – making it a priority for growth and development.
		Low (<0.75)	Prospects limited by weak base and	A week base indicate a need for diversification and declining

LSRG	Provincial Growth	Location Quotient	Classification	Definition
			declining competitiveness	competitiveness reflects that it might not be structural as strong as is needed for development potential
	Negative	Medium or High (> 0.75)	Prospects limited by external trends and declining competitiveness	External trends hinder development, supported by declining levels of competitiveness.
		Low (<0.75)	Prospects limited overall	Growth prospects are limited to a minimum for this sector and the economy should rather focus on other economic sectors.

Source: Sask Trends Monitor, 2007

Table B2.4: EMM Industry Targeting Classification, 2008 to 2013

	Main Sectors	Sub-Sectors
Leading Sectors		
Current and Emerging Strengths ***MSRG leading (grow faster than district) and PG positive***	✓ None	✓ Electrical machinery and apparatus ✓ Radio, TV, instruments, watches and clocks
Prospects limited by external trends and weak base ***MSRG leading (grow faster than district) and PG negative***	✓ None	✓ None
Lagging Sectors		
High priority retention target and prospects limited by weak base and declining competitiveness ***MSRG lagging (grow slower than district) and PG positive***	✓ Electricity, gas and water ✓ Construction ✓ Wholesale and retail trade; catering and accommodation ✓ Transport, storage and communication ✓ Finance, insurance, real estate and business services ✓ Community, social and personal services ✓ General government services	✓ Electricity ✓ Water ✓ Wholesale and retail trade ✓ Catering and accommodation ✓ Communication ✓ Finance and insurance ✓ Business services ✓
Prospects limited by external trends and declining competitiveness and prospects limited overall ***MSRG lagging (grow slower***	✓ Agriculture, forestry and fishing ✓ Mining and quarrying ✓ Manufacturing ✓	✓ Food, beverages and tabacco ✓ Textiles, clothing and leather goods ✓ Wood and paper, publishing and printing ✓ Petroleum products, chemicals,

	Main Sectors	Sub-Sectors
than district) and PG negative		rubber and plastic ✓ Other non-metal mineral products ✓ Metals, metal products, machinery and equipment ✓ Transport Equipment ✓ Furniture and other manufacturing ✓ Transport and storage

Source: Demacon, 2015

The industry target classification is displayed graphically in Figures B.8 and B.9. The size of the circles represents the location quotient, that is, the relative size of the sector.

Sectors located in the top and bottom left quadrants are considered having limited prospects because these industries are declining in the aggregate economy. If they are small they have additional challenges and if they are within the negative range in terms of LSRG, they also suffer from declining competitiveness.

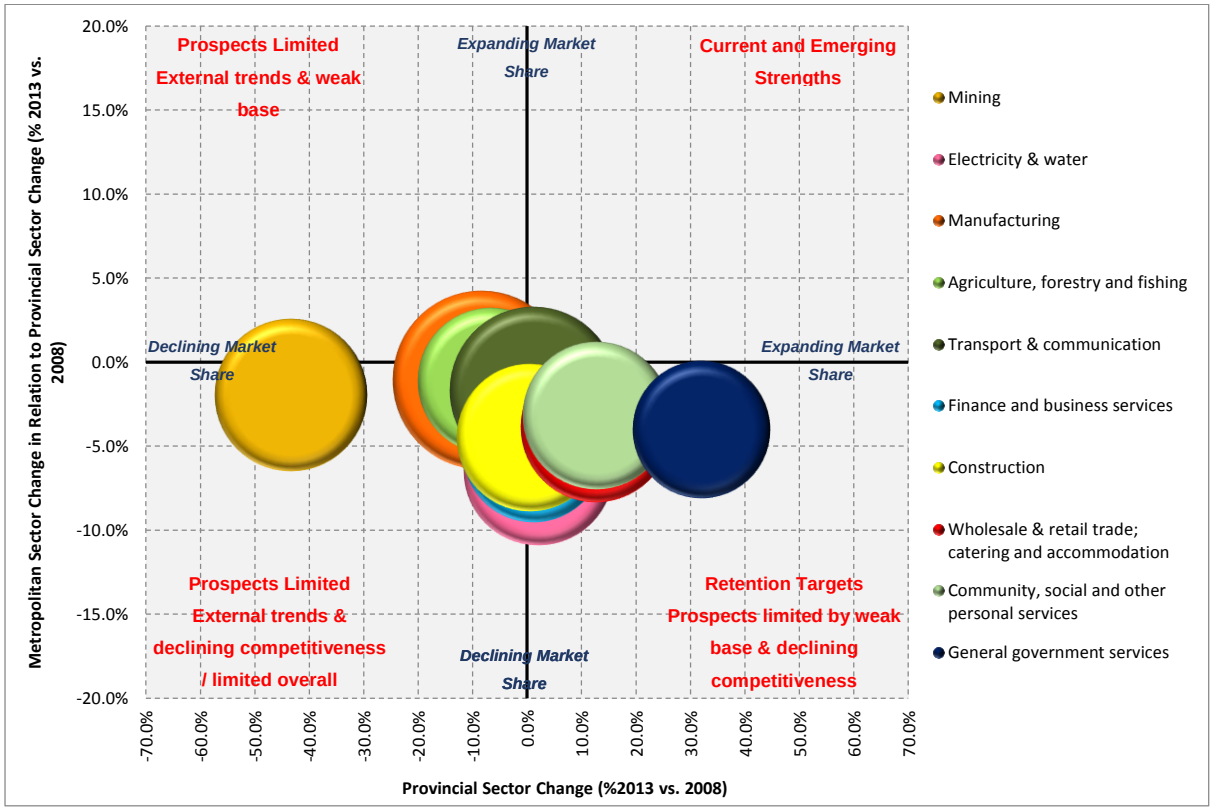
In business terminology the **upper left quadrant** reflect industry groups that are **increasing their market share** in a **declining market**, industries in the **lower left quadrant** represents industries that are **losing market share in a declining market**.

Sectors falling within the lower right quadrant are classified as retention targets (if large enough) because they are growing in the aggregate economy but more slowly locally. Smaller industry groups in this quadrant are deemed to have limited prospects.

Sectors within the upper right quadrant are growing in the aggregate economy and locally. These industries represent the strengths and emerging strengths of the local economy. If the circles are large it represents current strengths and if the circles are smaller then it reflects emerging strengths.

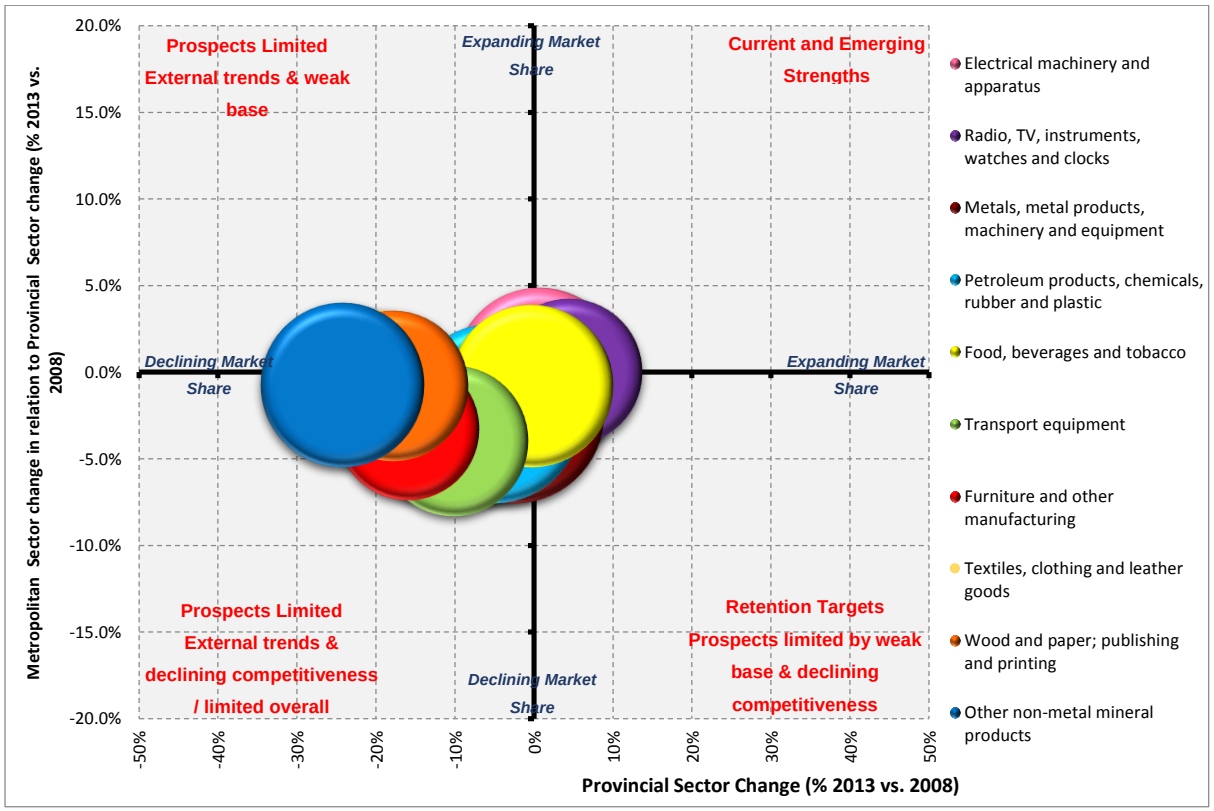
In **business terminology** industries in the **upper right quadrant** are **increasing their market share** in an **expanding market**, whereas the industries in the **lower right quadrant** are **losing market share** in an **expanding market.**

Figure B2.2: EMM Main Sectors Classification System, 2008 to 2013



Source: Demacon, 2015

Figure B2.3: EMM Manufacturing Sub-Sectors Classification System, 2008 to 2013



Source: Demacon, 2015

Given the Competitive Advantage Analysis (CAA) focused on examining local industries / sectors to identify leading and lagging sectors and their prospects for employment growth. The following primary target sectors have been identified.

Table B2.5: Primary Target Sectors in the EMM

Main Sectors	Sub-Sectors
• Electricity, gas and water • Construction • Wholesale and retail trade; catering and accommodation • Transport, storage and communication • Finance, insurance, real estate and business services • Community, social and personal services • General government services	• Electrical machinery and apparatus • Radio, TV, instruments, watches and clocks • Electricity • Water • Wholesale and retail trade • Catering and accommodation • Communication • Finance and insurance • Business services

Source: Demacon, 2015

Note: In business terminology industries in the upper right quadrant are increasing their market share in an expanding market, whereas the industries in the lower right quadrat are losing market share in an expanding market. These sectors represent the primary target sectors within the metro's economy.

Table B2.6: Secondary Target Sectors in the EMM

Main Sectors	Sub-Sectors
• None	• None

Source: Demacon, 2015

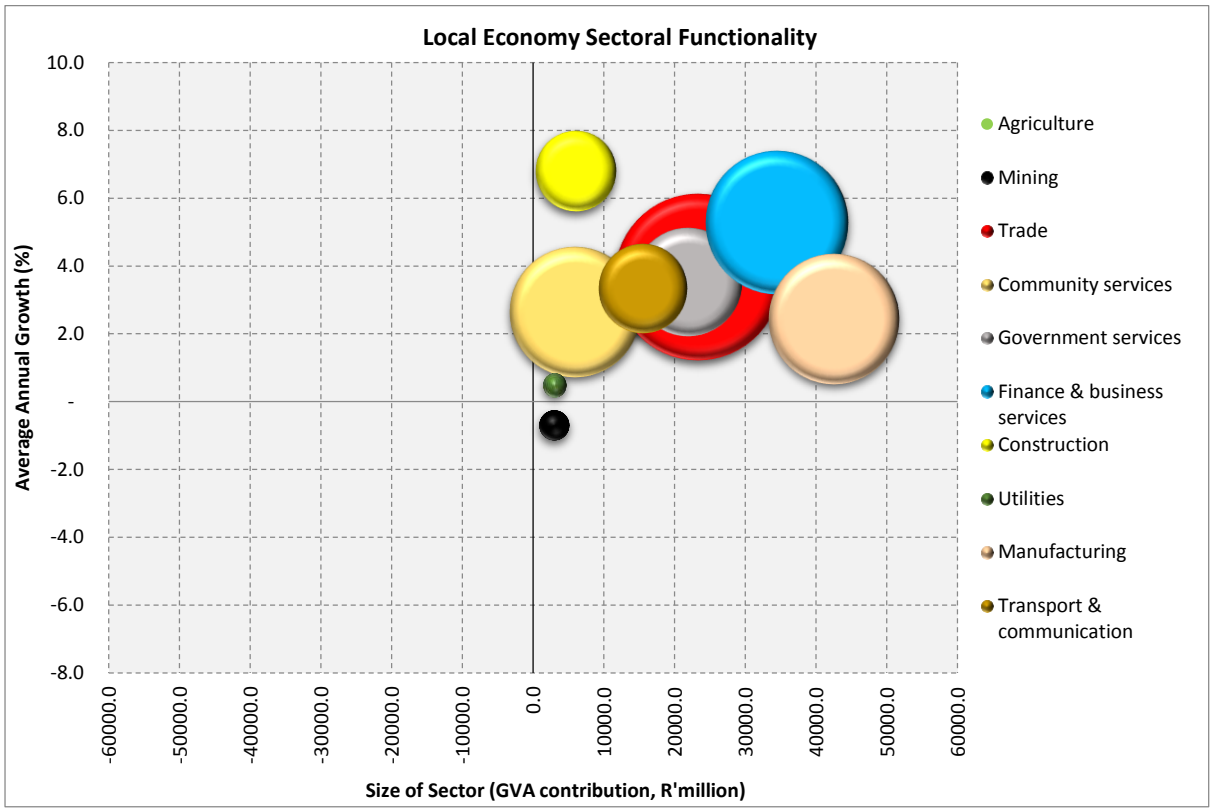
Note: The secondary target sectors should represent industries within the upper left quadrant increasing their market share in a declining market.

The findings from the labour-based analyses (Leading-Lagging Analysis, Carvalho Analysis and the Industry Target Classification) point to deeper underlying fundamental challenges. As the labour-based analyses focus on employment, it can be concluded that the economic sectors within the EMM do not perform optimally due to the fact that labour within these sectors are not competitive. Therefore initiatives should be taken to ensure increased labour competiveness within the EMM's economy, such as increased skills development, but also raise important questions regarding over-regulation of labour legislation that renders South African labour costly and uncompetitive.

Economic Functionality – Shift Share Analysis (GVA Based)

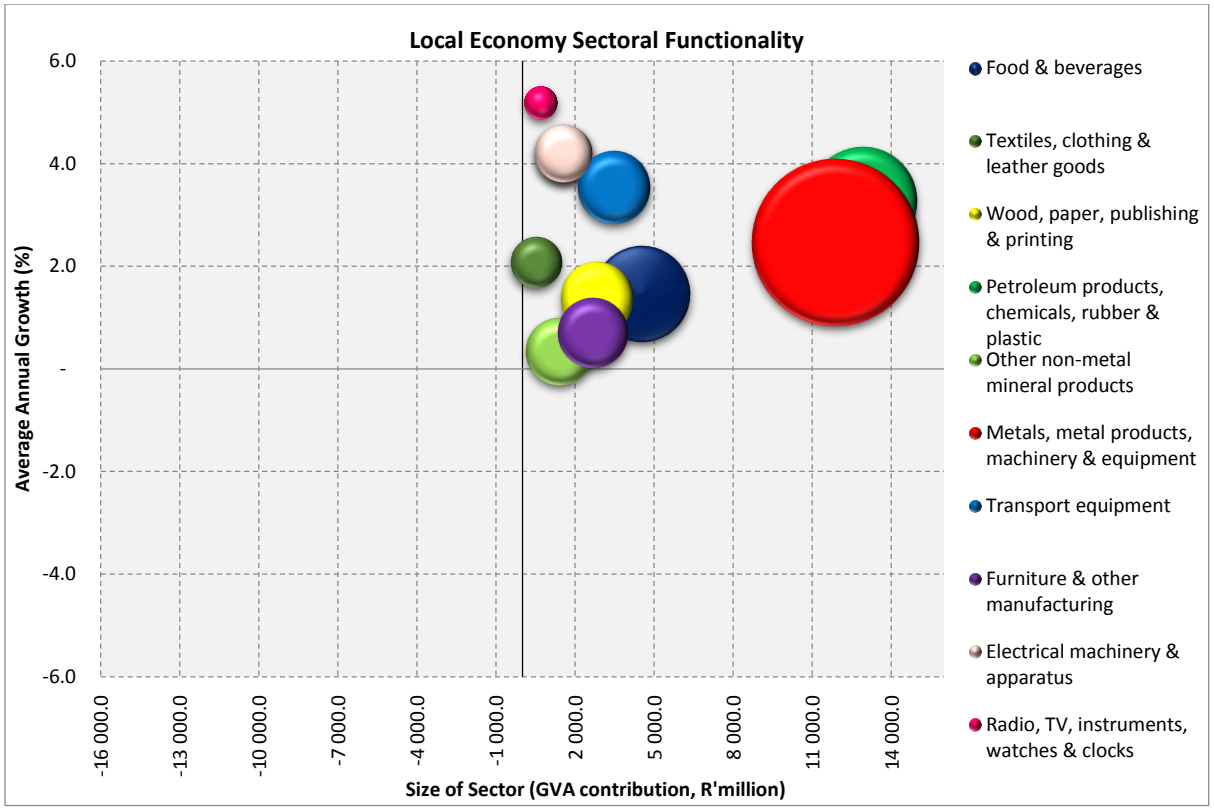
It should be noted that the analysis above is labour based – penalising some sectors due to the volatility of the labour force in our country. Therefore this analysis is supported by a shift-share analysis based on economic contribution and economic growth.

Figure B2.4: EMM Shift-Share Analysis – EMM Economy Sectoral Functionality



Source: Demacon, 2015

Figure B2.5: EMM Shift-Share Analysis – Economy Sectoral Functionality (Manufacturing Sub-Sectors)



Source: Demacon, 2015

From the production-based analysis (Shift-Share) the sectors that are both large sectors (in terms of GVA contribution) and high growth sectors for the EMM can be identified as the following sectors:

- Manufacturing
- Finance and Business Services
- Retail Trade
- Warehousing

It is clear to see from the Shift-Share analysis that the manufacturing sector still remains a large and growing sector within the EMM. This dispels the notion that manufacturing is a declining, uncompetitive sector in general, but it does point to very specific sectoral inefficiencies. Furthermore the following manufacturing clusters within the EMM's manufacturing sector experienced significant innovations in the past two decades:

- Chemicals cluster (particularly pharmaceuticals and plastics)
- Metal production and metal working cluster
- Transport and equipment cluster (particularly air transport equipment)

The following clusters within the manufacturing se experienced significant innovation

In this content the pressure for spatial growth and expansion in these sectors reveal a direct correlation with the need for public sector infrastructure investment.

Having said this, it is clear that the EMM's largest and growing economic sectors lie within and around the major nodes and established industrial precincts – it is these areas that should receive priority in terms of National Treasury maintenance and renewal guidelines. The aforementioned areas are largely built-up and future growth will gravitate to very specific high potential locations – these will include new nodes, corridors and precincts along proportionally the largest investment opportunity in retail, commerce, warehousing and business services.

Synthesis

Two approaches were followed to identify the potential economic growth sectors within the metropolitan economy – a *labour based approach* and a *production based approach*.

Both of these approaches contribute in identifying the key growth sectors for the metropolitan economy that will ensure the expansion of the economic base and employment base of the economy, which leads to new opportunities attracting continuous domestic and foreign investment.

Table B2.7: Key Focus Sectors

Labour Based Key Focus Sectors	Production Based Key Focus Sectors
Main Sectors	
• Electricity, gas and water • Construction • Wholesale and retail trade; catering and accommodation • Transport, storage and communication • Finance, insurance, real estate and business services • Community, social and personal services • General government services	• Wholesale and retail trade; catering and accommodation • Manufacturing • Finance, insurance, real estate and business services • Community, social and personal services • General government services • Construction
Manufacturing Sub Sectors	
• Electrical machinery and apparatus • Radio, TV, instruments, watches and clocks	• Metals, metal products, machinery and equipment • Petroleum, chemicals, rubber and plastics • Food and beverages • Transport equipment • Electrical machinery

As these sectors expand the metropolitan economy will be strengthened, enabling it to attract a larger provincial market share (labour and production based). It will furthermore contribute a reduction in the unemployment figure of the metro. Expansion of these sectors will also manifest spatially – requiring the expansion of infrastructure.

Infrastructure investment is needed to expand economies (economically & socially):

- Transport systems (road, rail, airports, ports, waterways, etc.)
- Energy generation
- Supply and transmission
- Water collection and supply
- Communication systems (telecommunications, internet, etc.)

South Africa, and the metro itself faces a number of constraints to growth:

- Electricity challenges
- Inadequate economic infrastructure in general
- Unwieldy regulatory processes which delay investment
- Insufficient Government co-ordination, which contributes contributed to investor uncertainty

National government has developed a 9-Point Plan, at a scale large enough to constitute a 'Big Push' to ignite economic growth. The 9-Point Plan consists of the following:[4]

1) Resolving the energy challenge;
2) Revitalising the Agriculture and the agro-processing value chain;
3) Advancing beneficiation and adding value to our mineral wealth;
4) More effective implementation of a higher-impact Industrial Policy Action Plan;
5) Encouraging private sector investment;
6) Moderating workplace conflict;
7) Unlocking the potential of SMMEs, Co-ops, Township and Rural enterprises;
8) State reform, including boosting the role of state owned companies in broadband, water, sanitation and transport infrastructure; and,
9) Growing the Ocean Economy and Tourism.

SPACE ECONOMY

Figure B2.6 provides a visual representation of the land budget per region for the next 25 years. From a spatial economic perspective, an estimated 34 526.3 ha will be required to accommodate urban expansion over the next 25 years. It will constitute a combination of infill development and urban expansion – whereas infill development may be desirable to enhance urban efficiency and infrastructure optimisation, future growth and expansion of the urban fabric are prerequisites for high economic growth.

Figure B2.7 illustrates the current GVA / economic activity geographically with the EMM. The key areas with the highest concentration of economic activity, specifically based on manufacturing, wholesale and retail trade as well as the business and finance sector GVA contribution, include:

1. Greater Kempton Park and O.R Tambo area
2. Wadeville and Alberton area
3. Germiston and Edenvale area
4. Greater Boksburg area
5. Brakpan and Springs area

[4] Source: Department of Communication, Press Conference, 2015

Figure B2.6: EMM Land Budget per Region, 2015 – 2040

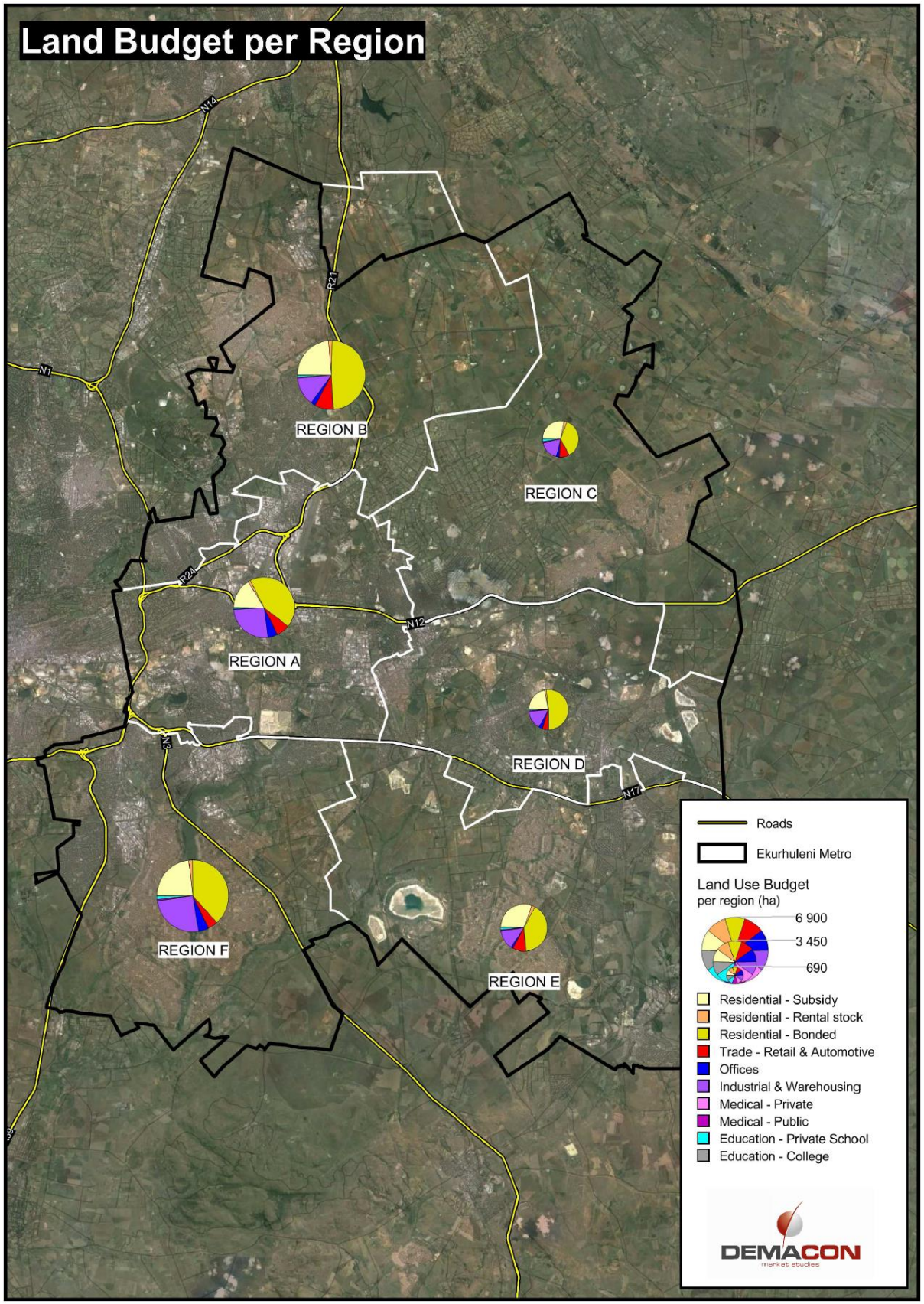


Figure B2.7: Current EMM GVA, 2013

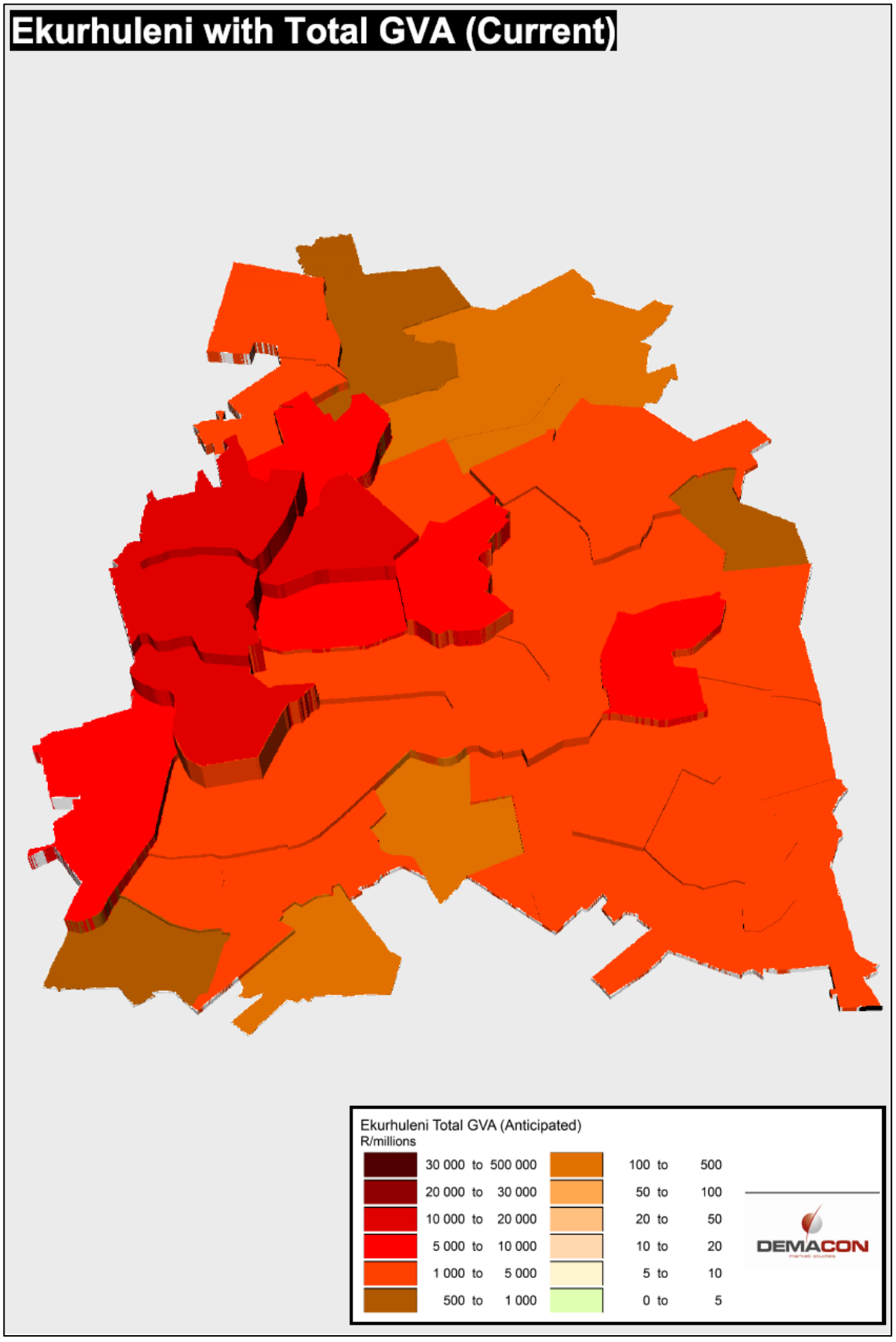
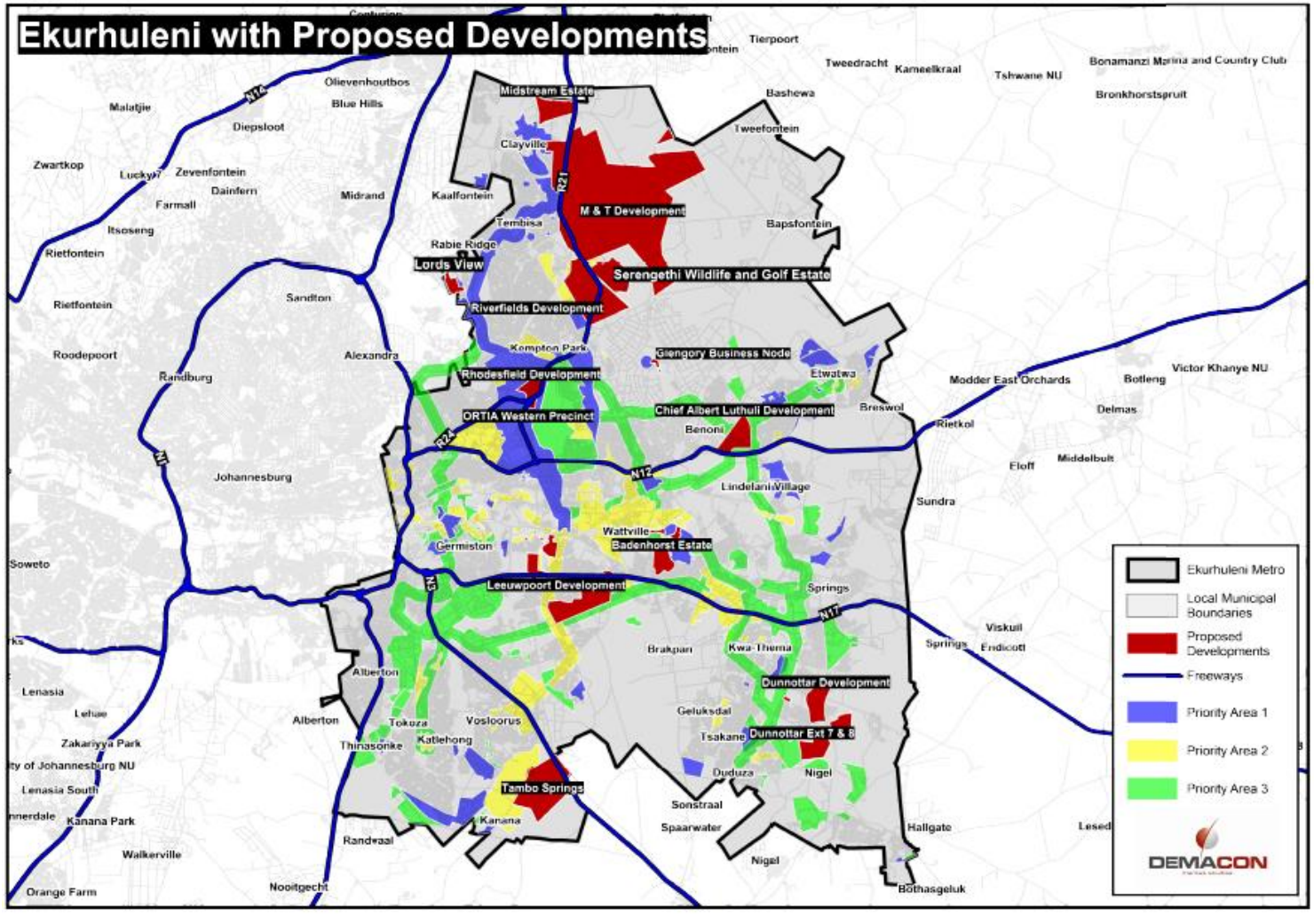


Figure B2.8 illustrates a number of the Major Developments identified for economic growth in the Metro, together with their Priority Areas.

Figure B2.8: Location of the Major Development in the Context of Ekurhuleni



The Priority Areas span on average 26.9% of the total Ekurhuleni Metropolitan Municipality. These Priority Areas are largely configured around built-up areas and along mobility corridors. As such there are space and infrastructure realities to be considered:

1. Existing infrastructure has limited capacity to sustain new development and will require future upgrades
2. Some infrastructure is situated underground, which will limit expansion possibilities
3. Not only is developable land extremely limited in theses Priority Areas – existing social infrastructure will not be able to cope with excessive densification (over and above the land demand for additional res and commercial expansion), additional land will be required to facility concomitant growth in social infrastructure

The Priority Areas can at best absorb (provide) 10% - 15% of future spatial growth requirements. This yields an optimum split of **80:20**: 80% of future development will take place outside these Priority Areas and will entail the development of new growth areas that will facilitate extensive private sector investment and tax base expansion.

Consistent with the economic modelling, by far the **greatest future sustained economic benefits** (including capital investment, economic growth, job creation, expansion of the tax base, etc.) will be generated by **private sector investment projects situated outside these Priority Areas.** Land readiness (including zoning rights, EIA approvals, etc.) and infrastructure availability coupled with ease of land assembly are major considerations to the investor – domestic and foreign. In this context the market has already identified the following high potential investment locations (which are in various stages of implementation):

- Badenhorst Estate Development (outside Priority Areas)
- Chief Albert Luthuli Mixed Use Development
- Dunnottar Residential and Ancillary Services Development (outside Priority Areas)
- Dunnottar Ext. 7 and 8 Development (Gibela) (outside Priority Areas)
- Glengory Mixed Use Development (outside Priority Areas)
- Leeuwpoort Mixed Use Development (outside Priority Areas)
- Lords View Industrial Estate
- M & T Mixed Use Development (outside Priority Areas)
- Midstream Estate Development (outside Priority Areas)
- Rhodesfield Urban Development Framework
- Riverfields Mixed Use Development
- Serengeti Estates Development (outside Priority Areas)
- Tambo Springs Industrial Development (outside Priority Areas)
- ORTIA Western Precinct

These projects constitute an important response to viable investment opportunities (proportional to demand) – demand pressures which cannot be absorbed within the existing built-up urban fabric trough densification only, as is suggested in certain policy stances.

It is imperative to note that the Priority Areas, strategic as they may be in terms of public transport infrastructure etc., will not be able to replicate the aforementioned growth. This reality is **in line with National Treasury's focus on economic development**, over and above urban restructuring and upgrading and renewal. Major new development projects are required to grow the economy. A flexible approach will have to be taken, otherwise growth will be undermined.

SYNTHESIS

Excessive densification is promoted in the mature economies of Europe and America, where economic and population growth have tapered. South Africa has a distinctly different growth dynamic, which requires an equally unique and location appropriate approach to future growth. As opposed to singular dimensional strategies centred on densification and infill development, a vital consideration to relieve pressure on existing infrastructure (including the transportation networks) will be to **promote and actively facilitate the development of new nodes** closer to residential growth areas.

This strategy will succeed in **bringing jobs closer to the household**. South Africa is a **developing economy** that will **experience continued high rates of growth and in-migration** over the **next three to four decades**. Densification alone will not be able to cope with these growth demands.

In the context of the aforementioned geographic growth split (80:20) a **flexible development approach** will be required – in the context of South Africa's historic and all too often rigid and protectionist planning stances. As the South African population matures and population growth gradually decelerates over the next three to four decades, pressure on the urban edge will subside.

Thus, for the next **three to four decades high growth and spatial expansion** will need to take **precedence i**n terms of infrastructure investment within the EMM. Therefore the geographical areas within the EMM that possess the greatest potential need to be identified in terms of realising the following objectives:

- ✓ Economic growth
- ✓ Job creation
- ✓ Sustainable growth and government revenue (including property rates and taxes, company tax, personal income tax, etc.)

Having said this, the bulk of future growth in Ekurhuleni will intensify along an extended / broader centre corridor area from the R21 in the north through Germiston and Alberton, to the R59 and the N3

in the south. The most powerful development drivers and catalytic projects are situated in this broader corridor environment. In this broader corridor context, one can distinguish between current development drivers and future primary development drivers:

Current development drivers include:

- Albertina Sisulu Corridor (R21)
- O.R. Tambo International Airport
- R59 Corridor
- N3 Corridor

Future primary development drivers include

- Riverfields development
- M & T / R21 development
- Ekurhuleni Aerotropolis
- N3 / Tambo Springs development

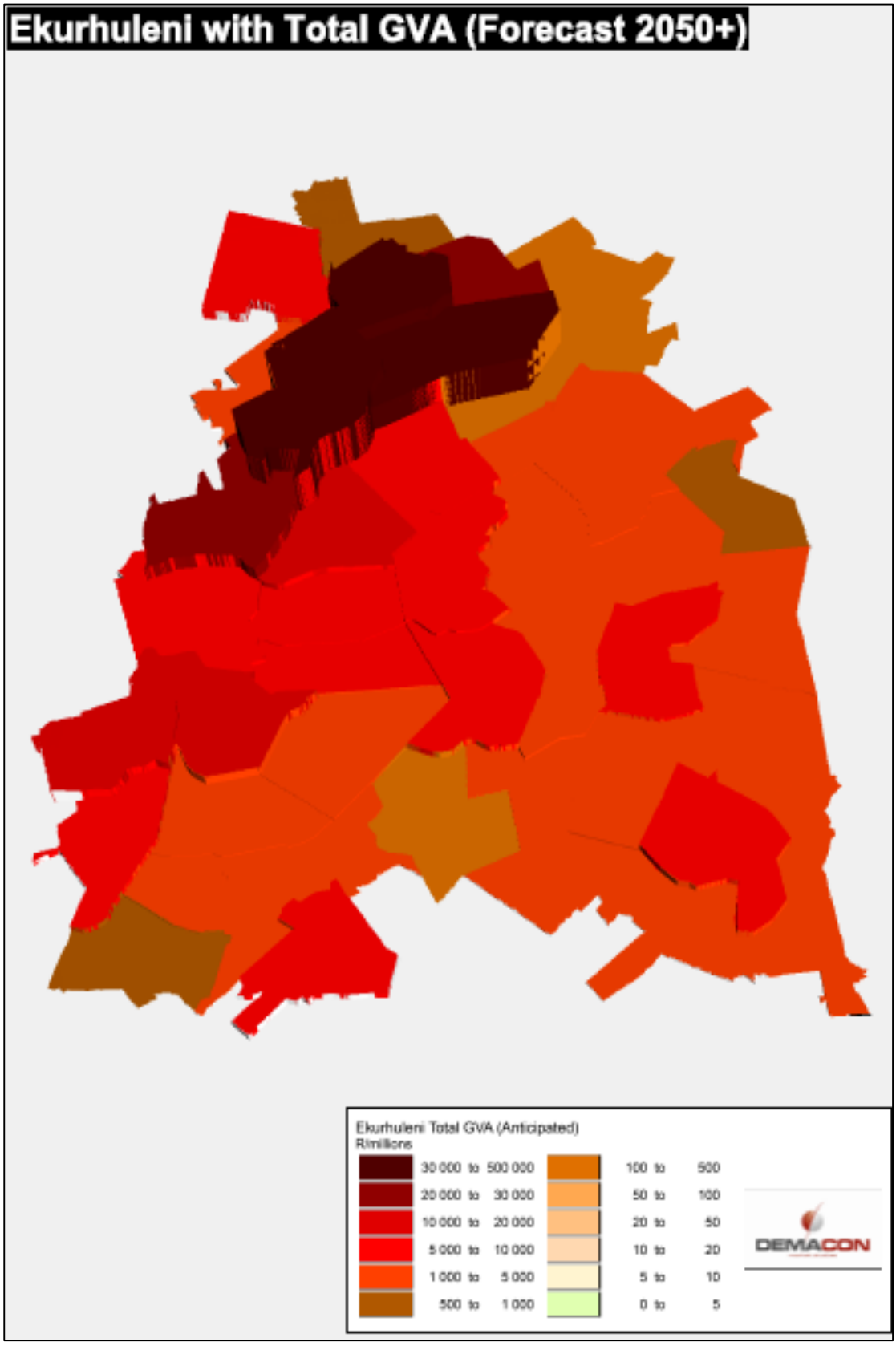
The aforementioned major private sector development projects listed earlier (and which are by and large situated outside the Priority Areas *per se*) are all in direct response to the aforementioned development drivers.

The **significance and rateability of the second economy**, (which also contribute to the objectives of economic growth, job creation as well as sustainable growth and government revenue generation), is largely unrecorded and as such its significance is not fully accounted for in economic analyses and policy documentation. The second economy is also largely untaxed, accounts for approximately 20% of the GDP, and is grossly misunderstood. In this economy lies a vast opportunity in equalising a more sustainable tax revenue base. Arguments in favour of reduced individual and company tax and increased VAT rate (which has much broader and equitable reach) have been increasingly advanced in the past few years.

The **tourism sector**, specifically in terms of business tourism, also **holds significant opportunities** for economic growth within the EMM, seeing that the **O.R. Tambo International Airport is the gateway to the province**. Infrastructure development in and around the O.R. Tambo International Airport is key to unlocking the business tourism potential of the EMM.

Figure B.15 illustrates the future EMM GVA / economic activity based on the medium to long-term impacts that could be generated as a result of the investment in economic infrastructure within the EMM, specifically looking at the major developments identified for economic growth and expansion within the metro. Consistent with corridor development, within the EMM there is a **clear gravitational pool towards the R21 Corridor**. The same principles do, however, not hold true for public transport dominated routes: high value attracts high value.

Figure B2.9: Future EMM GVA – Medium- to Long-Term Forecast



B.3 TRENDS AND DEMAND FOR BASIC INFRASTRUCTURE

This section of the Build Environment Performance Plan will review the trends and demands of the basic infrastructure provided by the Ekurhuleni Metropolitan Municipality, which include water, sanitation, roads and storm water, electricity and solid waste.

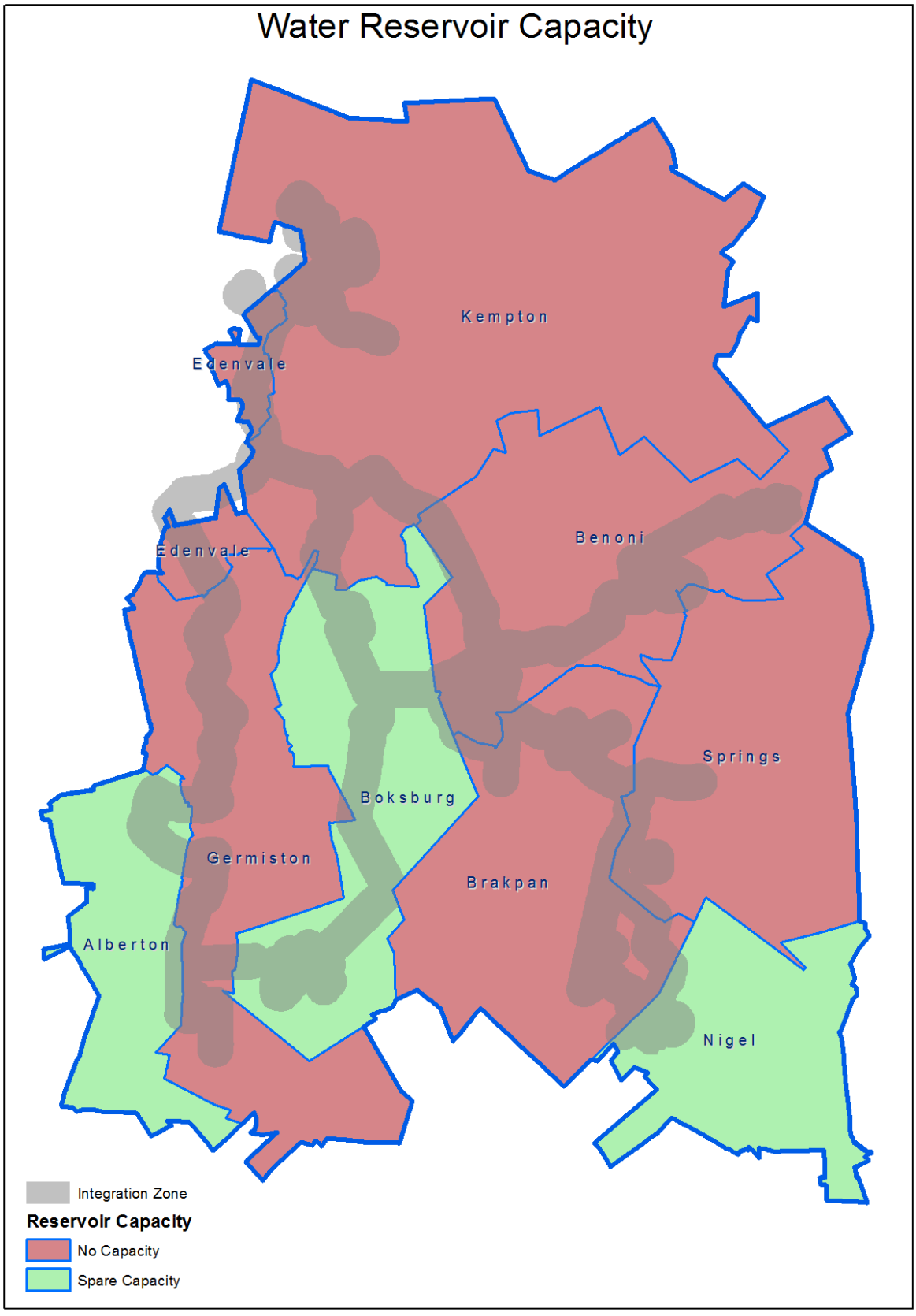
CURRENT CAPACITY OF MAJOR INFRASTRUCTURE SERVICES INDICATED SPATIALLY

Most of the municipality's infrastructure within the urban development boundary is at its full capacity and outside the urban development boundary there is no bulk infrastructure. Ekurhuleni is upgrading its infrastructure supply system in terms of Water, Sewage, Roads, Storm water and Electricity as development continuous. Very little to no spare capacity exists in the systems for any immediate expansion projects, this capacity must be increased as development progresses. Alleviation of these bulk constraints is crucial to under-pinning all strategic objectives, including servicing existing customers, facilitating new service access and stimulating economic growth. One of the flagship projects of the municipality is the Aerotropolis. This project will stimulate growth and job creation, which put a lot of pressure on the infrastructure capacities within the EMM. There is a great need to have a strategic, overarching, multi-sectoral, long term infrastructure plan to address the Aerotropolis development trajectory that the city has embarked on. This particular master plan would adequately inform the relative provincial and national departments of the development trends and needs of the city to meet the ever growing demand. The ICDG spend would in this instance assist the city to adequately plan for bulk infrastructure and perhaps cost the proposed infrastructure upgrades to enable the city to propose a value proposition in order to adequately source funding from various possible streams.

WATER:

Rand Water is the bulk supplier of all purified water to the areas within EMM. Rand Water is therefore responsible for the planning and monitoring of the water sources utilized and also caters for the municipality's demand forecast. EMM is responsible for the distribution of the water to most of the areas in the municipality, however there are few areas which are supplied directly by Rand Water. The municipality currently experiences capacity shortages within most of the water infrastructure. In terms of the major water infrastructure the EMM reservoir capacities are indicated in the table below and spatially illustrated in the figure below.

Figure B3.1: Reservoir Capacity within EMM.

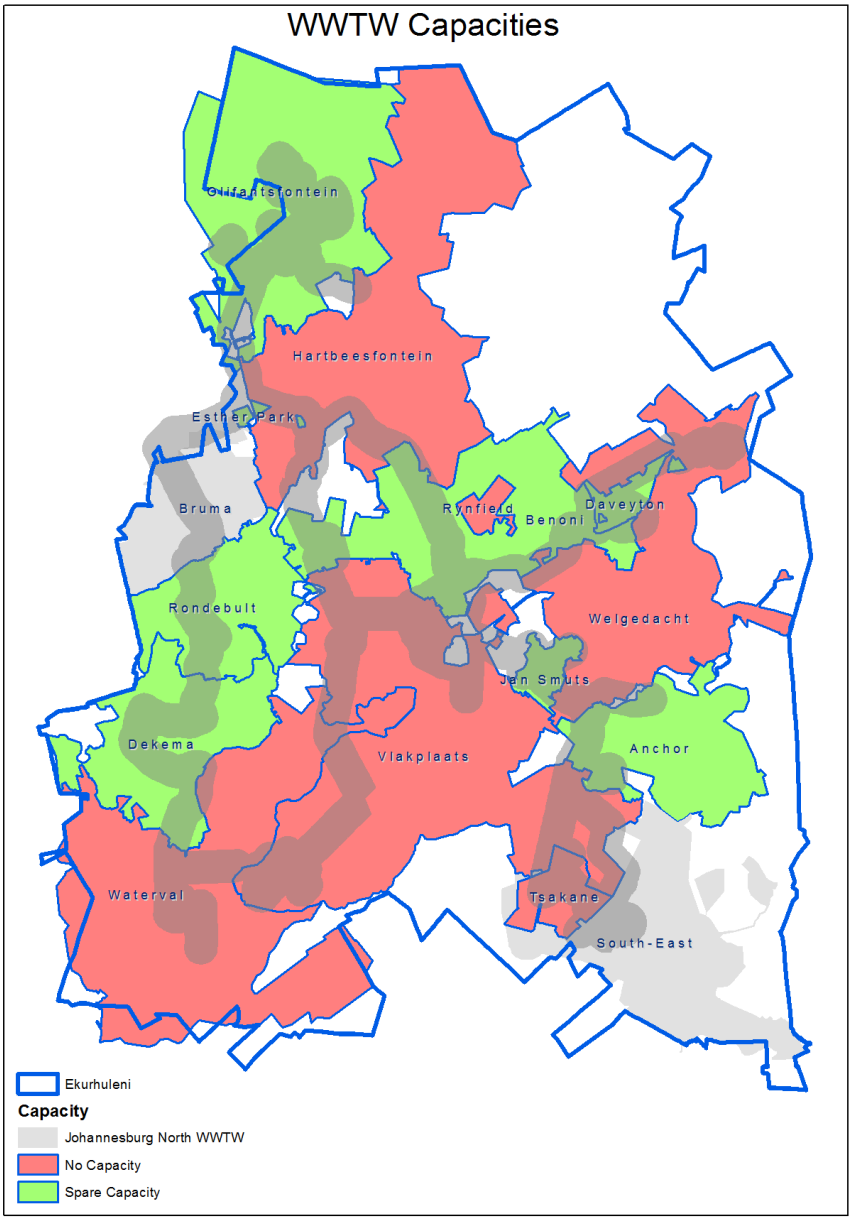


(Source: Capacity information is obtained from a presentation on water and sanitation strategy July 2016 received form water and sanitation department. Information from Rand Water and final figures from GLS is required to update the map according to supply areas and to incorporate the additional capacity supplied by Rand Water.)

SEWER:

East Rand Water Care Company (ERWAT) is a fully owned utility of EMM and is responsible for treating and monitoring the effluent discharge into the river streams. The Waste Water Treatment Works (WWTW) in the municipality are currently operating in overstressed capacities and this is one of the major constraints towards development within EMM. The total treatment capacity of Erwat within the boundaries of EMM is currently 614.5Ml/d. The total flow to Erwat plants is presently 713.6Ml/d which implies that the total requirement for sewage treatment now exceeds the total hydraulic treatment capacity of Erwat.[1] Storm water ingress in some areas is contributing towards the hydraulic treatment capacity of ERWAT's plants. Some of the sewer pumpstations and sewer pipelines within the municipality are also operating at full capacities. In terms of the major sewer infrastructure the WWTW capacities are indicated in the Figure below.

Figure B3.2: WWTW Capacity within EMM per Drainage Area

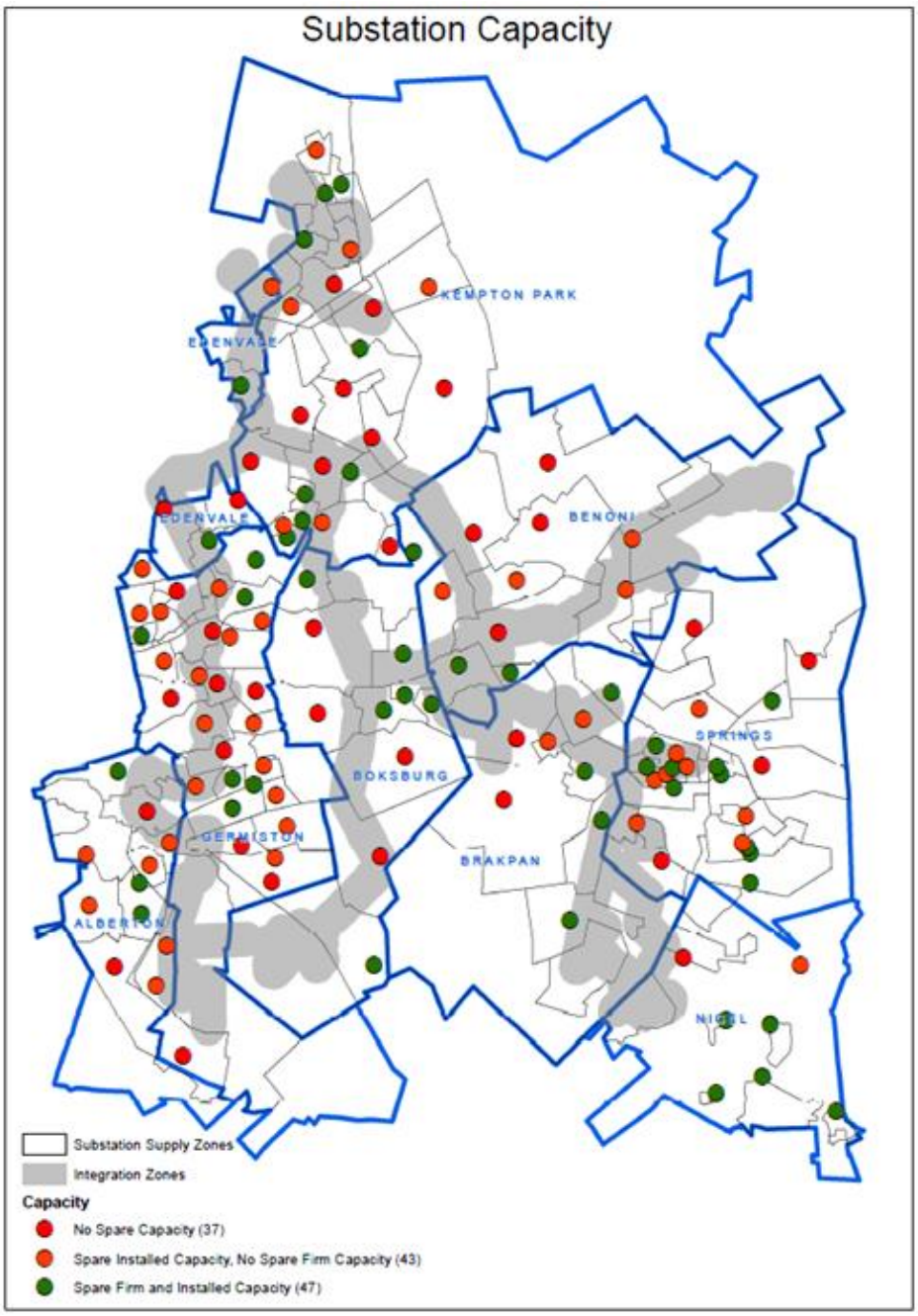


(Source: Capacity information is obtained from a presentation on water and sanitation strategy July 2016 received form water and sanitation department. The finalisation of the drainage areas together with the department is in progress and will be included in the final document.)

ELECTRICITY:

The bulk electricity within EMM is being purchased from Eskom and EMM is responsible for the distribution to most of the areas within EMM. City power provides electricity to Phomolong and a section in Bassonia area. To ensure access to electricity by household and businesses, the municipality has 127 substations which distributes 2 600 MVA to consumers. Most of the electricity infrastructure in EMM is currently at its full capacity. There are 127 substations within EMM and only ±47 substations operates within firm capacity. The figure below indicates the average available substation capacities.

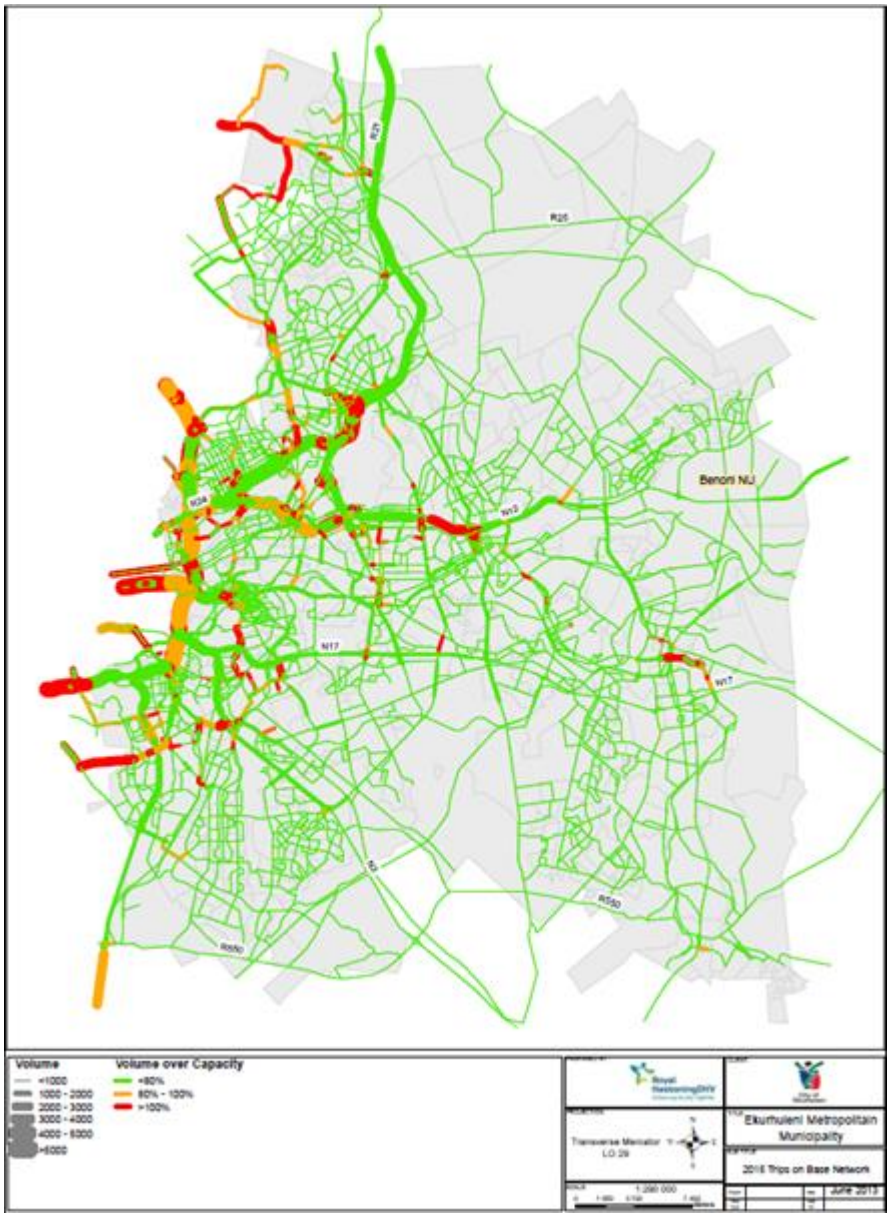
Figure B3.3: Electricity Capacity within EMM



(Source: Capacity information is obtained from EMM Energy Masterplan and Refurbishment, Network Assessment. The finalisation of the supply zones together with the department is in progress and will be included in the final document.)

The region is well served by freeways running north-south and east-west, linking the EMM to the rest of Gauteng province, as well as providing mobility within the metropolitan area. These freeways, namely the N12, N17, N3, R21 and R24, carry the most traffic and are also the most congested. Most of these freeways have been upgraded as part of SANRAL's GFIP project. The total length of road network in EMM that is owned by the municipality is 9 871 km (81%), Gauteng province owns 2 177 km (18%) and SANRAL owns 158 km (1%) of the road network in EMM. The current rapid growth that is being experienced in Ekurhuleni, which is likely to continue, has resulted in major traffic and network capacity challenges along the city's grid. Large investments in road capacity will be required to accommodate the future demand. The figure below indicates the network volumes and capacities for the current year's AM peak hour, assigned on the base year network (2012) obtained from the EMME/3 macro-demand modelling.

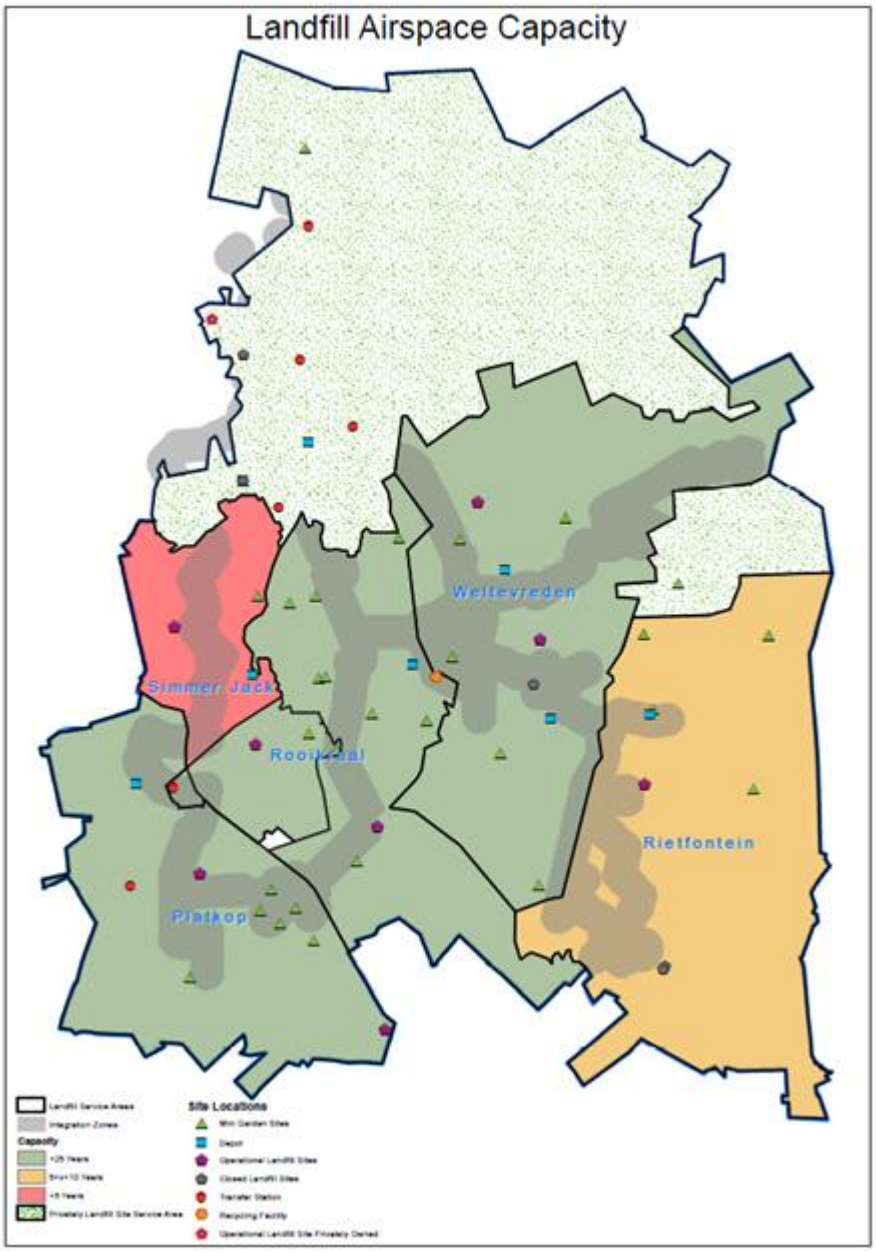
Figure B3.4: AM Peak Hour Volumes: 2015 Demand on Base Year (2012) Network



SOLID WASTE:

EMM operates and own five landfill sites though there is a responsibility to manage eleven more closed landfill sites, through external service providers. EMM services all the areas in the municipality expect for the Northern service area, which is serviced by a privately owned landfill site. The total waste that goes to the five active landfill sites is recorded at weighbridges and adds up to 92 670 tons per month. EMM has 318 specialized vehicles in fleet for solid waste service purposes. The available of adequate air space and the availability of sufficient fleet are challenges currently experienced within the municipality. The figure below indicates the capacities of the landfills based on available airspace within the different service areas. [1]

Figure B3.5: Lifespan of Landfill Sites within EMM Based on Airspace Capacity in Years



DEMAND PROJECTIONS FOR EACH MAJOR SERVICE, INCLUDING CURRENTLY UNMET DEMAND (BACKLOGS) AND FUTURE GROWTH REQUIREMENTS

The municipality by large offers comprehensive services to its customers and the existing backlogs are largely the result of new township establishment, the formation of informal settlements and the municipality having opted for higher level of services than the national minimum levels of service adopted.[1] Ekurhuleni has a CMIP which also defines the services backlogs within the municipality. According to the CMIP, EMM has the following service access backlogs:

Table B3.1: Services Access Backlog in EMM.

Service Description	Access to Services (Measured in customer units)	
	Adequate Access	Access Backlog
Water	1 030 706	148 322 (12.6%)
Sewer	965 497	213 531 (18.1%)
Electricity	950 462	228 566 (19.4%)
Roads & Storm water	973 475	205 553 (17.4%)
Solid Waste	1 081 256	97 772 (8.3%)

(Source: EMM CMIP 2014-2029)

The current water demand (AADD) in EMM is 999 Ml/day with only 959.1 Ml/day reservoir capacity, this result in a backlog of ±40 Ml. The WSDP indicates that the projected AADD growth rate for the next 5 years is calculated to be 1.877%, which results in a water demand of 1 847,16Ml/day. A Water Conservation/Water Demand Management Strategy, WDMM Business Plan and WDM Action Plan have been developed and subject to funding and human resources will be implementing 5-6 years water demand activities in order to reduce its Non-Revenue Water from 40.4% to 20% and its water losses from 31.8% to 17%. It should be noted that once these reduced targets are met, water demand management be an on-going initiative in order to maintain the achieved targets.

Over the past eight years the composite growth rate for ERWAT is estimated at 6.1 % per annum. Since the previous planning exercise (2008) the average annual increase in flow was 32.7 Ml/d. Over the same period the average annual increase in capacity was 4.0 Ml/d, effectively increasing the capacity deficit at a rate of 27.4 Ml/d each year. For the purposes of system modelling, the growth over the twenty year planning horizon up to the year 2032, for the total ERWAT service area, is estimated at 3.2 % per annum ranging from 1.5% (low growth areas) to 4.0% (high growth areas) for individual plants. This translates into a forecast annual sewage flow increase of 28.6 Ml/d while new capacity needs to be commissioned at a rate of 31.4 Ml/d in order to match capacity with requirement. To accommodate the increase demand it is of utmost importance to implement projects to reduce the storm water ingress into the sewer conveyance system which will reduce the capacity constraints currently experienced within EMM.

The current electricity demand in EMM is ±3619 MVA and the total substation firm capacity is 2698 MVA, which results in a backlog of 993 MVA. The total projected demand for 2018 is 4042 MVA. With electricity being the service with the highest backlog figure, the municipality also considers the use of renewable energy. A 1000KW generator that uses methane gas collected from decaying waste has been commissioned at the Germiston landfill site. The municipality also enjoys adequate solar radiation, 860 solar modules are already producing 200 KW of solar power at the OR Tambo precinct.

EMM has a roads master plan which is used as a planning tool to guide the municipality in alleviating traffic congestion and associated environmental problems as well as, achieving a safe and orderly movement of people and goods along the city's road network. Comparison between the base year (2012) and future year networks for the 2037 demand scenario indicates a significant reduction in congested links, especially in the western and central parts. The majority of congested routes modelled on the base year (2012) network are contained within the following area: Alberton and the N3 to the south, R23 and Benoni to the east, R25 and Kempton Park to the north, and the N3 corridor to the west. This trend is consistent with the spatial development frameworks of the EMM, which concentrates economic and residential development in the central areas where the transport demand is high. However, despite the planned Class 1 and 2 routes, there are still some links showing high congestion and the roads master plan has identified priority routes for each road class for the long-term demand (2037). It is important for the municipality to implement the plan contained in the master plan to deal with the demand.

EMM currently has 5 operating landfill sites. Weltevreden landfill site currently services 827 tons of waste per day, Rietfontein landfill site services 571 tons of waste per, Rooikraal landfill site services 741 tons of waste per day, Simmer & Jack landfill site services 614 tons of waste per day and Platkop landfill site services 314 tons per day. The master plan for waste management in EMM considered all the necessary factors which influence the waste disposal growth rate and an annual waste disposal growth rate of 1.5% was estimated for the Landfill Facilities in EMM. Based on this growth rate the landfill sites will accommodate the waste disposal demand for >25 years, 9 years, >25 years. 2 years, 25 years respectively. The municipality has recently recapitalized the fleet for waste management services, but the availability of the fleet remains a challenge in the municipality.

In order to sustain the economic base and to sustain the current levels of economic growth, the asset base will have to grow in proportion to the expected economic growth rate. Based on these assumptions the CMIP indicates the following estimated investments which are necessary to address the growth requirements:

Table B3.2: Annual Investment Requirements to Sustain Economic Growth at Current Levels in the Municipality

Service Description	2016	2017	2018
Water	R 183 576 000	R 195 515 000	R 208 168 000
Sewer	R 157 462 000	R 167 703 000	R 178 556 000
Electricity	R 729 594 000	R 777 044 000	R 827 330 000
Roads & Storm water	R 872 299 000	R 929 030 000	R 989 152 000
Solid Waste	R 36 284 000	R 38 644 000	R 41 145 000

ASSET CONDITION AND MAINTENANCE REQUIREMENTS, INCLUDING DEMANDS FOR REFURBISHMENT/ REPLACEMENT OF ASSETS

Despite from the capacity problems experienced within EMM, the municipality also has an asset condition backlog which needs to be address to ensure continuous and sustainable service delivery. The current on-grid-infrastructure are decaying fast to an extent that continued dependence on these types of infrastructures will require extensive investment into renewals, maintenance and decommissioning. While it is projected in the CMIP that an R31billion investment into infrastructures will have to be made by 2025, off-grid solutions will have to be integrated.

The condition of the assets is measured according to the remaining asset value as stipulated in the CMIP. The table below indicates the average remaining asset value per service, which considers the asset life span and condition of the asset. From this it can be seen that for most of the assets, half of the useful life have been consumed.

Table B3.3: Remaining Asset Percentage Value per sector

Service Description	Remaining Asset Value (%)
Water	44%
Sewer	55%
Electricity	51%
Roads & Storm water	55%
Solid Waste	53%

The table below indicates the CMIP estimated asset condition backlog requirements for the current assets within EMM based on CRC (Current Replacement Costs). The electricity and roads and stormwater are the two sectors with the highest asset condition backlog.

Table B3.4: Estimated Condition Backlog per sector

Service Description	Condition Backlog (CRC in Rand)
Water	R196 854 170
Sewer	R75 031 650
Electricity	R1 962 844 089
Roads & Storm water	R1 518 649 132
Solid Waste	R39 590 733

The EMM agrees that maintenance efforts need to be intensified. It is estimated that EMM currently spends in the order of R2.1 million per year on maintenance activities on its current infrastructure and buildings portfolio, whilst the forecast maintenance budget is estimated to be in the order of R1.54 million and it is important that this budget is properly structured to extract optimum usage of the assets. Based on the nature and extent of the current infrastructure and buildings portfolio at EMM, it is estimated that 23.4% of EMM's annual maintenance expenditure should be on water and sanitation. 30.4% on roads and storm water and 34.1% on electricity infrastructure. This is approximately in line with the proportions of the asset values, but skewed towards the electricity assets given the critical nature of this equipment.[1] The EMM is aiming to increase the allocations towards repairs and maintenance on an annual basis at rates that exceed inflation levels to ensure the assets are maintained adequately.[2]

According to the CMIP the table below indicates the estimated asset renewal requirements. The figures include the asset renewal backlogs and the renewals as a result of new investments.

Table B3.5: Estimated Total Annual Renewal Requirements per sector (2016)

Service Description	Renewals due to backlog (2016)	Renewals due to new investment (2016)	TOTAL (2016)
Water	R82 169 000	R92 187 000	R174 356 000
Sewer	95 600 000	R126 518 000	R222 117 000
Electricity	445 011 000	R527 592 000	R972 603 000
Roads & Storm water	101 243 000	R901 124 000	R1 002 367 000
Solid Waste	2 639 000	R43 731 000	R46 370 000

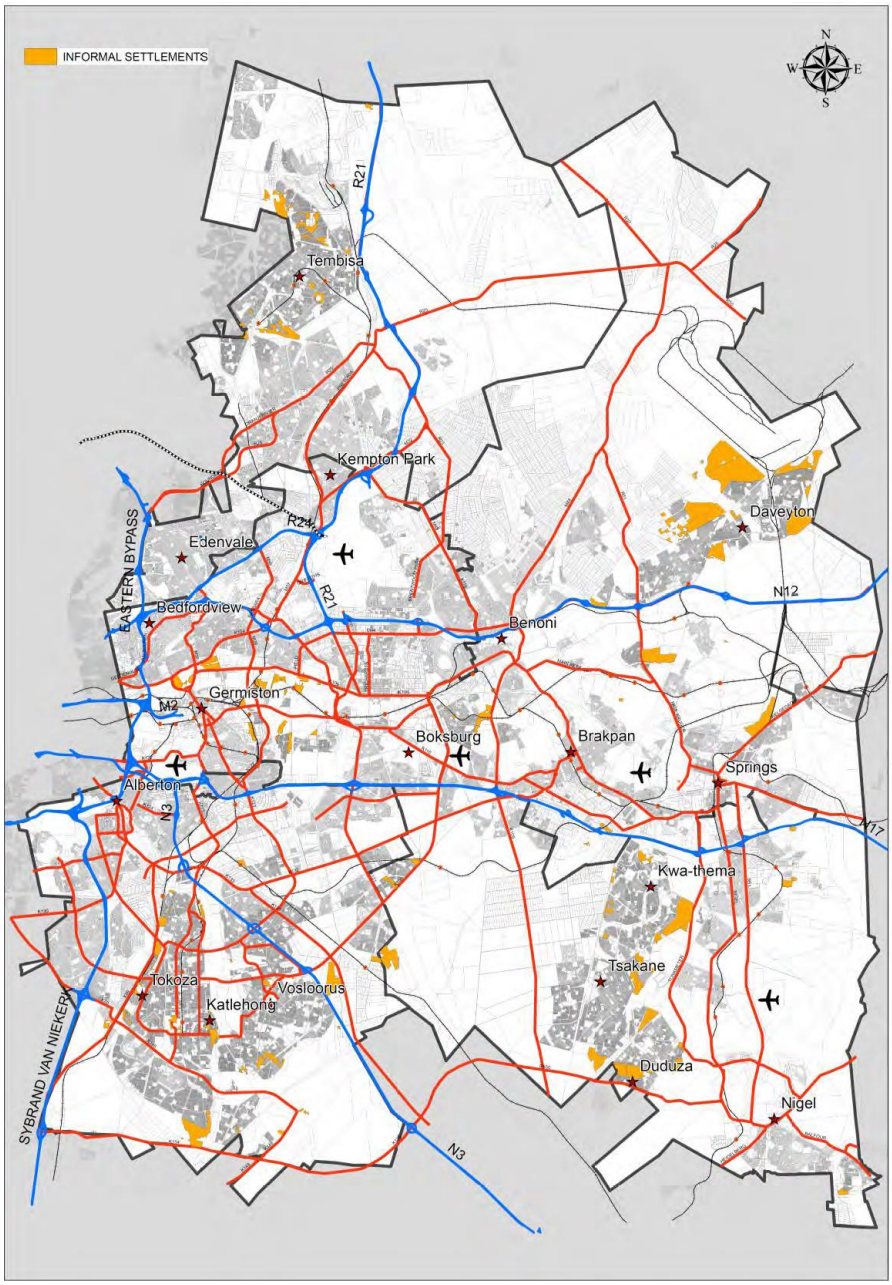
It is important for the municipality to implements the necessary systems to ensure reciprocal alignment between key planning instruments. Although the municipality has made progress over the last few years towards streamlining it service delivery policies and approaches and several high profile investment initiatives are in process, funding strategies are becoming crucial to ensure sufficient funding for the required asset investments within EMM.

B.4 TRENDS AND DEMAND FOR RESIDENTIAL INFRASTRUCTURE[5]

Informal settlements are characterised by *inadequate infrastructure, poor access to basic services, unsuitable environments, uncontrolled and unhealthy population densities and lack of effective administration*. A report by the Housing Development Agency (2012), ranks Ekurhuleni as the municipality with the second largest number of households living in Informal Settlements. **Figure B.13** indicates the current locations of informal settlements within the EMM.

[5] The Trends and Demands for Residential Infrastructure Section was compiled from information received from the EMM Department of Human Settlements, provided by Godfrey Hiliza. Additionally this section was reviewed by Mr Hiliza and comments addressed within the Draft. Comments was received 29/09/2015.

Figure B4.1: Locality of Informal Settlements in EMM



B.4.1 Current Status of Land and Housing

As indicated within the Human Settlement Plan (2016-2021) the Ekurhuleni population of 3 178 470, as recorded by Census 2011, have increased to 3 423 866 in 2014 and is expected to increase to 3 875 681 by 2019. The expected increase from 2014 to 2019 represents approximately 451 000 additional people which translates into ***161 362 additional households*** within Ekurhuleni by 2019.

It is noted that Germiston and Boksburg are the fastest growing towns with ***Tembisa, Katlehong, Germiston and Boksburg accommodating 64%*** of the total population of Ekurhuleni.

➢ TRENDS IN HOUSING DEMAND

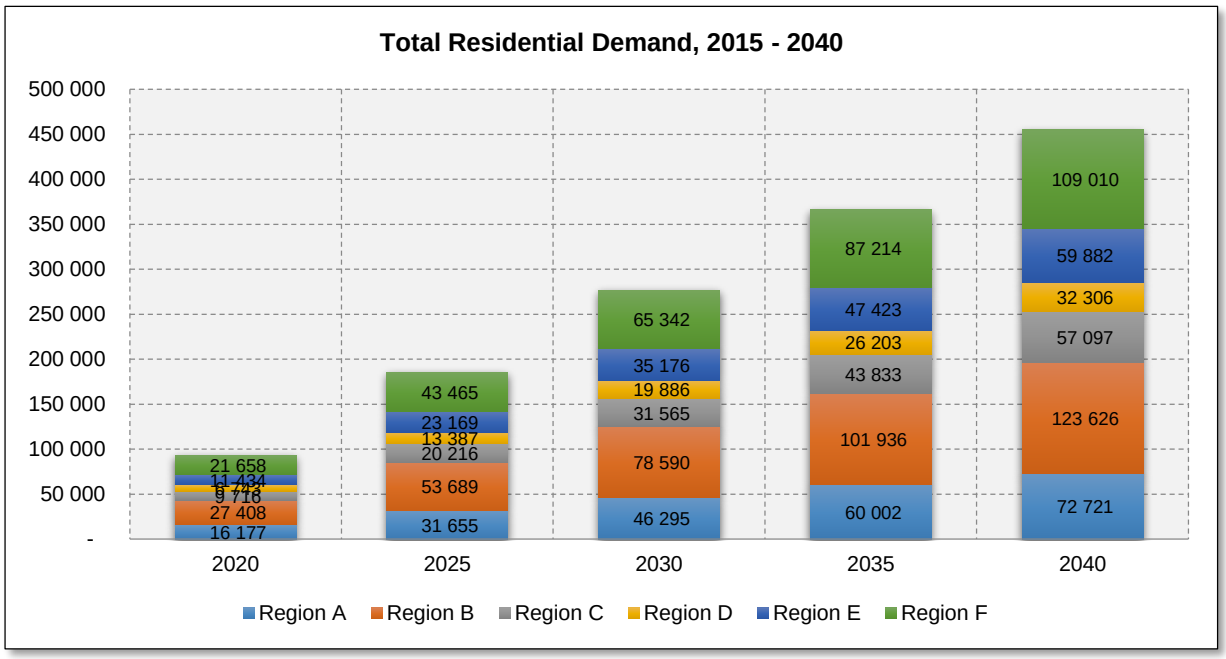
Backlogs and New Growth: Accommodating informal households in low cost housing units, it is calculated that approximately 157 720 low cost housing units are needed based on the current number of households in informal settlements. The total number of housing units, including backlogs and new growth is estimated at ***319 082*** housing units by 2019. It is notated, that to meet the existing housing backlog for subsidised housing, the City will have to deliver six times the current rate of housing units.

High total housing backlog including informal, backyard, hostels and waiting list units is estimated at ***449 507 units***. The total number of housing units needed translate into the following number of units per housing type:

- 164 699 Informal Settlements
- 200 973 Backyard
- 44 721 Waiting list
- 39 114 hostels

Housing demand for the EMM, as reflected within the Demacon Ekurhuleni CIF Task 5 – 25 Year Land Take-Up Report, indicates a total number of ***454 642 residential units*** can be accommodated / taken up within the market up to 2040. **Figure B4.2** illustrates the residential demand for the next 25 years (2015 – 2040 per Region. The demand is determined for different unit typologies.

Figure B4.2: Residential Demand, 2015-2040



Source: Demacon, 2015

Table B.4.1 indicates the cumulative residential forecast per Region and 5 year time intervals.

Table B4.1: Housing Demand, 25 Year Cumulative Forecast per Region

Region	2020	2025	2030	2035	2040
Region A	16 177	31 655	46 295	60 002	72 721
Region B	27 408	53 689	78 590	101 936	123 626
Region C	9 716	20 216	31 565	43 833	57 097
Region D	6 743	13 387	19 886	26 203	32 306
Region E	11 434	23 169	35 176	47 423	59 882
Region F	21 658	43 465	65 342	87 214	109 010
Total Ekurhuleni	**93 136**	**185 582**	**276 853**	**366 611**	**454 642**

Source: Demacon, 2015

The following table indicates the demand per housing typology per region for a 10 year forecast period (up to 20125).

Table B4.2: Housing demand, 10 Year Cumulative Forecast per Housing Typology

Housing typology	Region A	Region B	Region C	Region D	Region E	Region F	EMM
Subsidy	13 017	25 239	11 641	5 879	13 129	22 472	91 376
CRU	1 446	2 804	1 293	653	1 459	2 497	10 153
FLISP/GAP & Social	3 982	8 747	3 094	1 898	3 486	6 661	27 867
FLISP/GAP & Affordable Bonded	3 567	5 895	1 788	1 788	2 392	4 709	20 139
Bonded	9 643	11 004	2 401	3 169	2 703	7 126	36 046
Total	**31 655**	**53 689**	**20 216**	**13 387**	**23 169**	**43 465**	**185 582**

Source: Demacon, 2015

➢ **TRENDS IN HOUSING SUPPLY**

According to the Human Settlement Plan, between 2001 and 2011, approximately ***24 990*** low cost subsidised units were delivered.

The Gauteng Province identified two mixed housing development projects, as stated by the premier in her State of the Province address (2011), will receive continued investment from the province. The two housing projects relevant to Ekurhuleni include:

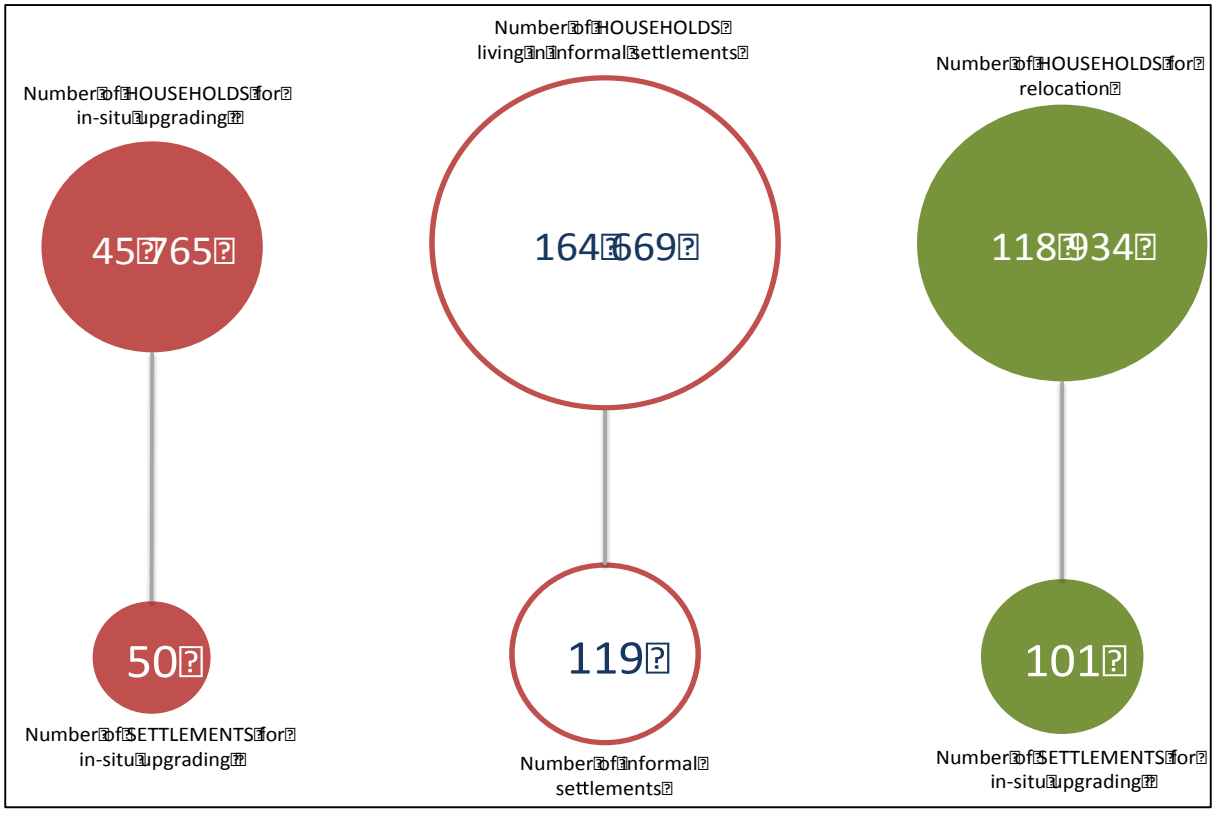
- Chief Albert Luthuli, which accommodates Daveyton and surrounding informal settlements; and
- Clayville, which accommodate Winnie Mandela Park, Tembisa and Strydom Land for Madelakufa and other parts of Tembisa.

Additional to the Provincial housing projects, the majority of land parcels currently earmarked for residential developments are located in four main concentrations at Tembisa, Daveyton, the southern parts of the Kwatsaduza complex, the southern and eastern extents of the Katorus complex, and in the central mining belt of Ekurhuleni.

MANAGEMENT AND UPGRADING OF INFORMAL SETTLEMENTS

The management and upgrading of informal settlements relates to the relocation and in-situ upgrading of informal settlements. **Figure B4.3** illustrates the number of households and settlements identified for relocation and in-situ upgrading within the EMM.

Figure B4.3: Informal Settlement vs Household Analysis



(Source: Human Settlement Plan)

Following is a list of the housing projects identified within the EMM. **Figure B4.4** illustrated the locations of current and new housing projects as identified within the Human Settlement Plan.

Upgrading of Informal Settlement Programme (UISP): The Metro is currently implementing the following six UISP projects that were handed over to the Metro through the accreditation process:

- Langaville Ext. 4 (Project 56);
- Alra Park Reiger Park Ext 5;
- Magagula Heights;
- Moleleki Ext's 1 & 2;
- Villa Liza 3; and
- Tinasonke Ext. 4.

Community Builder Programme (CBP): The Metro is implementing the CBP can be regarded as the enhance People's Housing Process Programme. The CBP projects delegated through the accreditation process includes the following:

- Mayfield Ext.1 (Project 56);
- Esselen Park (Witfontein 15 IR - R30);
- Pomona Estates;
- Esther Park;
- Terenure;
- Kwa Thema Ext. 3, 7a & Ekuthuleni;
- Tsakane Ext. 19;
- Vosloorus / KAVOSH; and
- Langaville Ext. 4 (Project 56) Informal Settlement Upgrading.

Integrated Residential Development Programme (IRDP): The programme replaced the Project Linked Subsidy Programme and provides for planning and development of integrated housing projects. The projects in the programme are planned and developed in phases and provides for a holistic development the house construction phase for qualifying housing subsidy beneficiaries and the sale of stands to non-qualifying beneficiaries and to commercial interests etc. Phase 1 includes Land, Services and Township Proclamation. Phase 2 includes Housing Construction and Individual ownership options.

The following IRDP projects have been handed over to the EMM through the Accreditation process:

- Holgatfontein 326 IR
- Rietfontein
- Kwa Thema
- Spaarwater
- Vlakfontein 130 IR Ptn 33
- Ergo Road
- Payneville Ext. 1
- Chief Luthuli Ext 4 (Consolidation & Subdivision)
- Rose Acres Palm Ridge ext. 4 & 5
- Rondebult 136 IR (Portion 10 & 17)
- Driehoek (Germiston ext. 4) Rehabilitated land
- Angelo Simmer and Jack
- Balmoral Ptn 31 & 234 (Driefontein 85 IR)
- Driefontein 85 IR Ptn 399
- ERPM Village (Ptn 402 & 403 Driefontien 85 IR)
- Vlakplaats portions 36 & 657
- Angelo Deep Klippoortjie 112 IR

- Vlakfontein Ptn 7 (Tsakane Ext 22 Emergency Area)
- Dukathole Goodhope (Germiston Ext 37)
- Eden Park West ext. 1
- Ulana Settlements
- Kutalo
- Villa Liza Ext 5

Mixed housing projects: The City has mixed housing developments planned for Chief Albert Luthuli, Leeuwpoort project. There are also a number of Mega projects, projects with land size that exceed 100hectares that are at feasibility stage. These include;

- Grootfontein in Duduza
- Palmietfontein in Katorus/Alberton
- Weltevreden
- Brakpan old location
- Witfontein

Social Housing: The City is implementing the Social Housing Programme through the Ekurhuleni Development Company (EDC), the Municipal owned Social Housing Institution responsible for the implementation of the programme. The city is currently implementing the following priority projects as part of the Social Housing Programme in the Metro:

- Delville Social Housing Development
- Germiston South Social Housing Development

Additionally, the city has identified the following priority projects as part of future Social Projects of the Metro:

- Pirrowville, Germiston station and N17 in Germiston;
- Bedfordview;
- Farrarmere;
- Benoni central and
- Kempton Park central

Furthermore, EDC and EMM DHS are is the process of identifying inner city buildings to be acquired for social housing purposes.

Hostels: The Ekurhuleni Metropolitan Municipality is the owner of 22 hostels. These 22 hostels consist of a 43 112 units.[6] The EMM Housing Department in conjunction with Gauteng Department of

[6] Source: opportunities for New Rental housing units in Gauteng, Social Housing Foundation, 2009

Local Government and Housing is currently implementing the Community Residential Units Programme aimed at the redevelopment and conversion of these hostels into family units. The business plans were approved for the redevelopment of the following hostels into family units:

- Buya Futhi blocks G and H;
- Kwamazibuko;
- Sethokga,
- Thokoza and
- Wattville (Ekurhuleni Metropolitan Municipality, 2011, p,56)

Serviced Stands Programme[7]**:** The Metro has initiated the implantation of Serviced Stands programme, through the following projects:

Table B4.3: Serviced Stands Programme EMM

Project Name	No. of Ward	No. of Stands	Budget Allocation	Budget Allocation for Human Settlements Component
Alliance Extension 9	71	634	21,397,500	**Yes**
Balmoral Extension 4	33	1,089	29,185,200	**Yes**
Holgatfontein / Mckenzieville	88	600	25,100,000	No
Langaville Extension 4	81	209	5,601,200	No
Palm Ridge Extension 9	53; 61	3,213	86,108,400	**Yes**
Payneville Extension 1	72	1,115	37,965,750	No
Chief Albert Luthuli Ext 4	24	326	13,105,200	No
Total		**7,186**	**218,463,250**	

Mega Projects: the Ekurhuleni Metropolitan Municipality (EMM) human settlement in consultation with the Gauteng Department of Human Settlements (GDHS) has packaged the following mega projects:

Table B4.4: Mega Projects EMM

Name of Cluster	Projects Constituting the Cluster	Total Yield
Northern Development Cluster	▪ Clayville Ext 45, 71, Heartland; ▪ Esselen Park (Witfontein) ▪ Esselen Park Ext 3 ▪ Tembisa Ext 25	19 568

[7] Information provided Mr. Hiliza (EMM Department of Human Settlements) 29/09/2015.

Eastern Development Cluster	▪ John Dube 2 ▪ Brakpan Old Location ▪ Tsakane 22 ▪ Chief Luthuli 6	31 674
Southern Development Cluster	▪ Leeuwpoort ▪ Germiston urban renewal housing programme (Including Social Housing, Balmoral 4&5 and Dukathole, Goodhope and Kutalo/ Robert Strachen ▪ Zwartkoppies ▪ Palmietfontein ▪ Rietspruit/Rietfontein, Palmridge 10 and 11	50 169

Table B4.10 is a summary of the goals, objectives and strategies as set out within the Housing Strategy.

Figure B4.4: Locations of Current and New Housing Projects

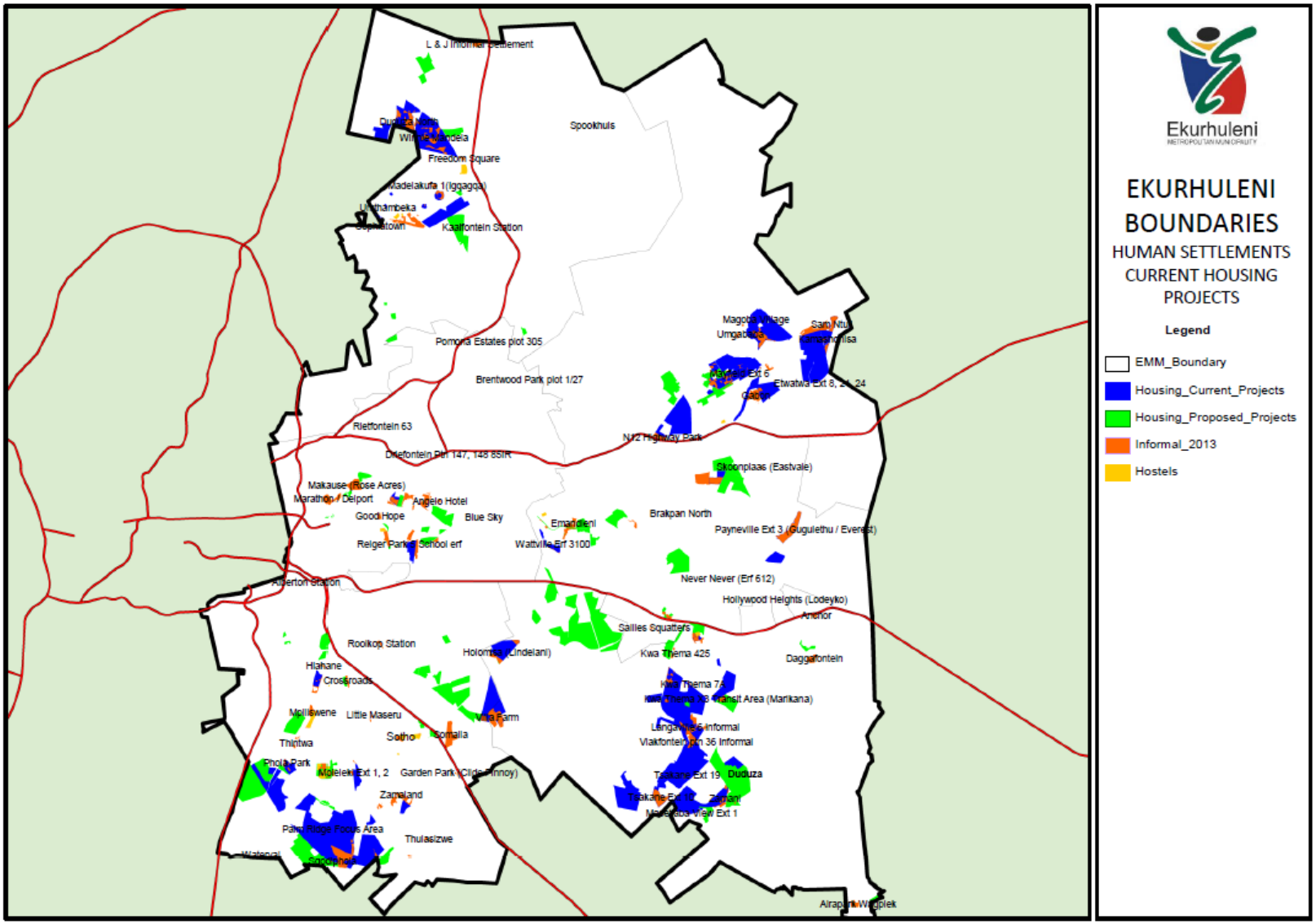


Table B4.5 Human Settlement Strategy (2016-2021)

Goal	Objective	Action
GOAL 1: INVEST IN PLACES OF DEPRIVATION	OBJECTIVE 1: Majority of projects located in poorest areas	Refine our spatial targeting model by developing an index of multiple deprivation
		Develop a monitoring and budgeting tool for most deprived areas
	OBJECTIVE 2: Deliver 76,000 housing units in the most deprived areas	Ensure all mega-projects are implemented over the next five years
	OBJECTIVE 3: Construct and launch 5 state of the art social facility complexes	Develop base design for facilities, design guidelines and terms of reference
		Design citizen programmes
		Ensure urban management models are in place
		Develop integrated project construction plans
		Integrate business planning (transport, social facilities and housing) and include in revised Integrated Development Plan (IDP) 2016/17
		Fast track planning approvals for construction of social complexes
GOAL 2: GET PEOPLE MOVING	OBJECTIVE 1: 4 000 housing opportunities within 800 meters of BRT stations (Phase 1)	Develop a land acquisition plan for land parcels within 800 meter catchment area
		Develop investment plan
	OBJECTIVE 2: Bring transport close to people	Identify all settlements located on the periphery that are outside the proposed BRT catchment area
		Develop joint integration implementation plans with Department of Transport to connect peripheral settlements to BRT routes
Goal	**Objective**	**Action**
GOAL 3: BUILD NEIGHBOURHOODS	OBJECTIVE 1: Support 10,000 landlords to upgrade small scale rental accommodation	Develop backyard housing support programme
	OBJECTIVE 2: Ensure houses are different- all mega-projects to include diverse housing typology ratios and implementation to include diverse range of typologies	Implement revised housing project process
	OBJECTIVE 3: Build quality	Develop design codes for housing typologies
		Develop urban design prototypes for small neighbourhood blocks
	OBJECTIVE 4: Design for social cohesion- implement neighbourhood design principles across all projects	Urban Design policies for all our settlement types
		Develop cooperative urban management models for townships and newly built subsidised housing projects
GOAL 4: MAKE OUR TOWN CENTRES GREAT	OBJECTIVE 1: Facilitate regeneration of five city blocks in Germiston	Revive urban development zone
		Establish residential improvement districts
		Expropriate derelict buildings
		Develop concise and bankable development packages for investors

MANAGEMENT / PREVENTION OF ILLEGAL OCCUPATION[8]

The Department has appointed service providers to assist with the removal of illegal occupation of land and also the patrolling of settlements to prevent further invasion and illegal occupation.

EMERGENCY HOUSING

As the needs arises, the Ekurhuleni Metro can apply for emergency housing funding, in line with the Emergency Housing Programme as presented under Part 3 of the National Housing Code, from the Gauteng Department of Human Settlements.

There are several policy response options for emergency housing set out in the Emergency Housing Programme (Part 3 of the National Housing Code, 2009). They are both proactive and reactive in nature, and can be divided into three main categories as indicated in **Table B4.6**:

Table B4.6: Emergency housing Categories

Housing Categories	Description
On-site assistance	• No relocation required. The site can be formalised over time, possibly through the use of other housing programmes • Relocation required in future. However, the site can be made temporarily suitable for habitation
Relocation / resettlement	• Relocation to a TRA that can be provided on a temporary or permanent basis, and where households can be resettled in the future when a permanent solution becomes available • Relocation to a permanent location with temporary assistance • Relocation to an existing developed area with temporary assistance
Formal housing repair / rebuild	• Formal housing can be repaired or rebuilt on the same plot or with relocation to a serviced plot

With the completion of the BEPP, only two application for emergency housing funds were listed, consisting of the ***Angelo Dump Informal Settlement***, and ***Moleleki Ext 4***.

B.4.2 Housing Improvements Strategies

DENSIFICATION STRATEGY

One of the tools available to the EMM to keep up with the needs of the growing population and to address the challenges of urban sprawl, congested infrastructure, etc. is densification.

[8] [8] Information provided Mr. Hiliza (EMM Department of Human Settlements) 29/09/2015.

Why densification as a tool for managing the rapid urbanisation of our cities?

- To achieve a more compact city thus reducing servicing costs and reducing travel times;
- To support the provision of public transport; and
- To create a more user friendly city including social and commercial services.

The suggested approach to densification is as follow:

- Relate densification to existing (rail) and future (BRT) public transport routes; and
- Relate densification to social services – with specific reference to schools – to maximise walkability.

The following general densification guidelines are proposed for the EMM:

- Public transport routes, 60-120 u/ha within a 200m radius along the corridor and within 200m of facility (including railway stations);
- Secondary and tertiary nodes, 60-120 u/ha within 500m of node;
- Primary nodes >120 u/ha up to 1km from node; and
- Low density zones (0-60 u/ha):
    - 0-15 u/ha anywhere in zone;
    - >15 u/ha to relate to social services (mainly schools) within 200m radius of facilities;
    - Properties <900m² not to be subdivided;
    - Erven developed at maximum density to be a minimum of 4 000m²; and
    - Provisions of the Town Planning Scheme to apply to height, coverage, FAR, parking and building lines.

ACCESS TO URBAN OPPORTUNITIES

By means of a well-integrated public transport system, communities will have access to urban job opportunities.

INTEGRATION WITH PUBLIC TRANSPORT

The public transport system, and especially the IRPTN, should form the backbone of future developments. Mixed use and high density developments should be focused along public transport corridors and nodes, preferable within 500m of public transport route / stop. Infill development is encouraged within strategically well located land e.g. mining land.

B.5 TRENDS AND DEMAND FOR COMMUNITY AND SOCIAL INFRASTRUCTURE

The current number social facilities located within the EMM (and per region) were recorded within the MSDF (2015 – draft) repost. The social facilities demand was calculated based on the CSIR classification of settlements to act as the basis for the provision of social facilities.

Table B5.1 is a summary of the current number of social facilities within the EMM and per region and the calculated required number of social facilities within the EMM and per region.

From the social facilities analysis with regards to ***Health and Emergency Services***, it is clear that Ekurhuleni is well provided for in terms of Regional Hospitals. Although, district hospitals are needed (4) within Regions B,C,E and F. A total number of 26 additional fire stations are requiring with the EMM, of which 6 are requiring in Region B, 4 in Region C, 2 in Region D, 5 in Region E and 9 in Region F. Additional police stations (26) are required, of which 6 are requiring in Region, 4 in Region C, 2 in Region D, 5 in Region E and 9 in Region F.

Looking at the ***Social Facilities***, it is clear that the EMM is in need of 44 additional *community halls* and 482.2ha for cemeteries. The additional Community halls required per region is as follows - 11 in Region B, 6 in Region C, 3 in Region D, 8 in Region E and 16 in Region F. The EMM currently has 63 *cemeteries* of which 44 are at full capacity and 19 are nearing full capacity. In terms of the estimated deaths per annum and the requirement for burial land per annum the EMM requires approximately 420ha of burial land up to 2027. The planning horizon for burial land should be 50 years, therefore approximately 1 838ha of burial land is required up to 2067. The largest land area needed for cemeteries are within Region F, requiring 167.7ha, followed by Region B, requiring 118.9Ha and Region C, requiring 69ha.

In terms of ***Education Facilities***, the EMM is very under provided. A total number of 223 additional Secondary Schools are needed within the EMM, of which 55 are requiring within Region B, 32 in Region C, 18 in Region D, 40 in Region E and 78 in Region F. THE EMM is in need of 398 additional Primary Schools, of with Region B requires 98, Region C 57, Region D 33, Region E 71 and Region F 139. In terms of Crèches, a total number of 932 is required, of which Region B requires 230, Region C 133, Region D 77, Region E 167 and Region F 325.

The EMM is under provided in term of ***Sport and Park Facilities*** (Recreation Provision). The EMM requires 341 additional Sport stadiums and 377 additional Swimming pool complexes. In terms of Sport Stadiums, Region B requires 11, Region C 6, Region D 3, Region E 8 and Region F 16. The total number of 377 Swimming pool complexes required per Region is as follows - Region B requires 8, Region C 4, Region D 2, Region E 6 and Region F 2.

Table B5.1 Social Facilities

Facilities	Number in EMM	Number Required in EMM	Number in Region A	Number Required	Number in Region B	Number Required	Number in Region C	Number Required	Number in Region D	Number Required	Number in Region E	Number Required	Number in Region F	Number Required
Health and Emergency Services														
Regional Hospital	5		1		1				1		1		1	
District Hospital		4				1		1				1		1
Special Clinic														
Clinic	80		11		12		8		7		17		25	
Community Day Care Centre	2						1		1					
Satellite Clinic	2										1		1	
Correctional Centre														
Oral Health Services	1				1									
Frail Care	1										1			
Community Health Centre	7	16			1	4	1	2		1	2	3	3	6
National / Central Hospital														
EMS Station	25		7		3		2		3		4			
Oral Health Centres														
Mobile Services	15		4		3				4		3		1	
PHC Services		37				9		5		3		7		13
Health Post	1								1					
Specialised Hospital														
Fire Station	27	26	8		3	6	3	4	3	2	4	5	6	9
Police station	39	26	8		5	6	4	4	5	2	7	5	10	9
Social Facilities														
Community Hall	53	44	6		10	11	6	6	8	3	11	8	12	16
Cemetery	59	482.2ha	7		11	118.9ha	5	69ha	11	40.1ha	10	86.5ha	15	167.7ha
Education														
Tertiary Institution	6				1		1		1		2		1	
Secondary School	234	223	50		43	55	29	32	29	18	28	40	55	78
Primary School	368	398	44		68	98	52	57	39	33	65	71	100	139
Crèches	728	932	134		306	230	26	133	50	77	29	167	183	325
Recreation Provision (Sport and Parks)														
Sport stadium	50	341	10		7	11	5	6	5	3	9	8	14	16
Swimming Pool Complex	37	377	9		5	8	3	4	5	2	7	6	8	2

From the above brief overview, it is clear that Region F requires the most community and related facilities, whilst Region A is the best provided for in terms of community and related facilities. **Figure B5.1** and **Figure B5.2** is a graphical illustration of the social facilities within the EMM and the calculated required number per region.

Between 2006 and 2014, several community facilities were built, thereby broadening access for our residents. Some of the achievements in this regard include:

- Construction of 485 km of roads;
- Complete eradication of the bucket system;
- 368 high mast lights have been installed;
- 3445 street poles have been erected;
- Four regional parks have been developed;
- Eight multipurpose parks were upgraded;
- Four nature reserves have been upgraded; and
- A total of 60 000 trees have been planted.
- Five large stadiums re-developed and upgraded
- Three new libraries constructed

Figure B5.1: Social Facilities – Excluding Education

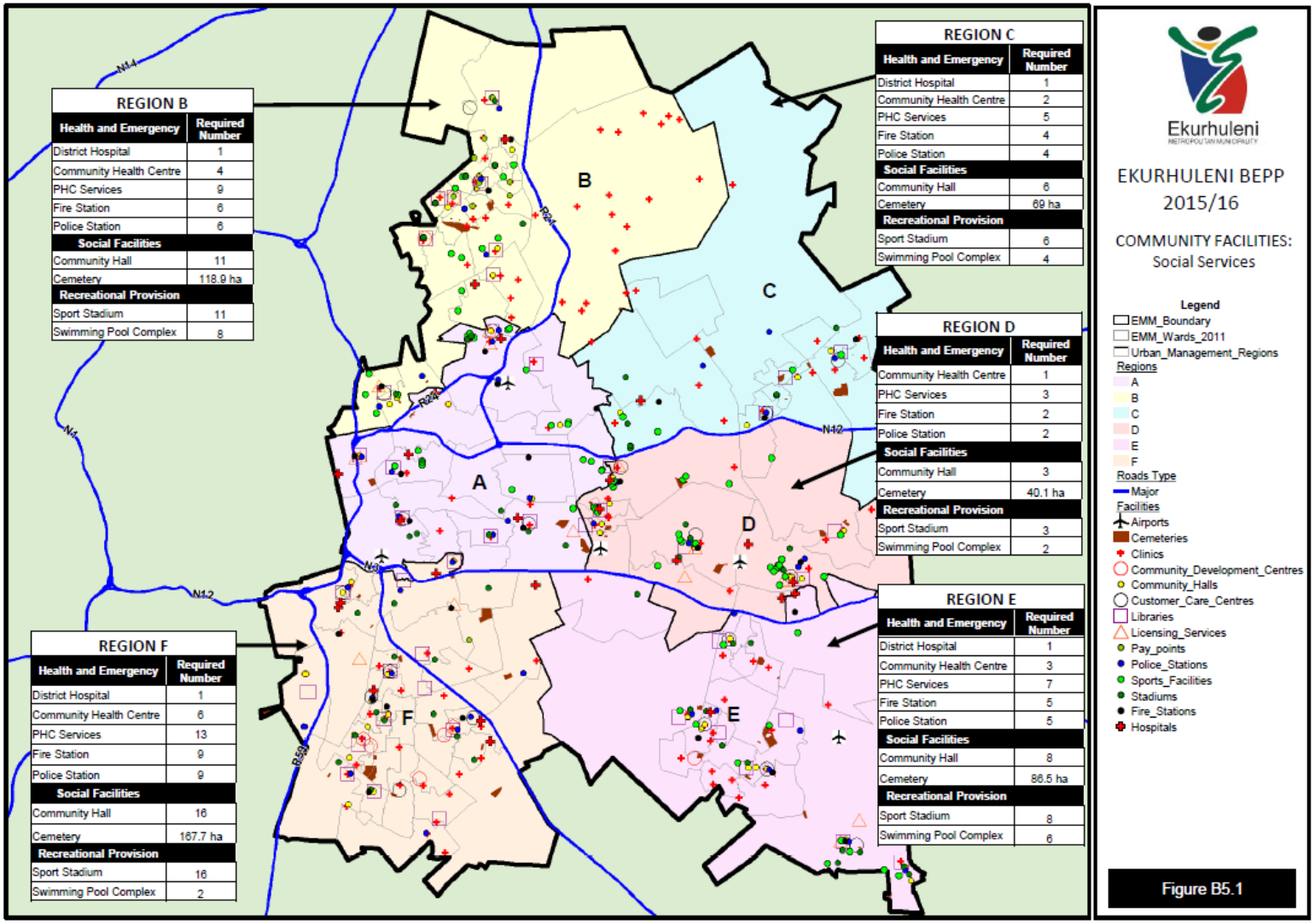
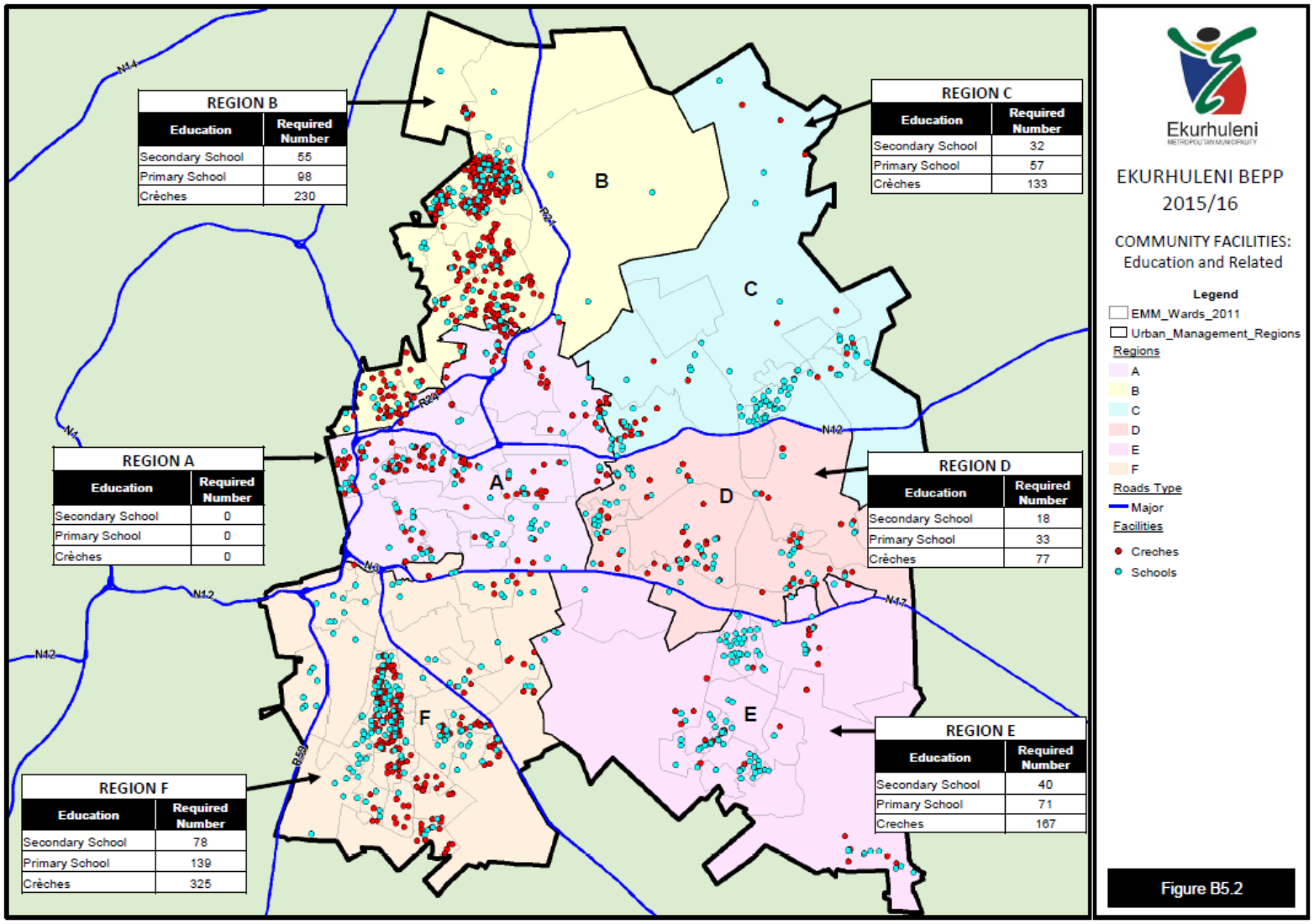


Figure B5.2: Social Facilities - Education



B.6 TRENDS AND DEMAND FOR TRANSPORTATION

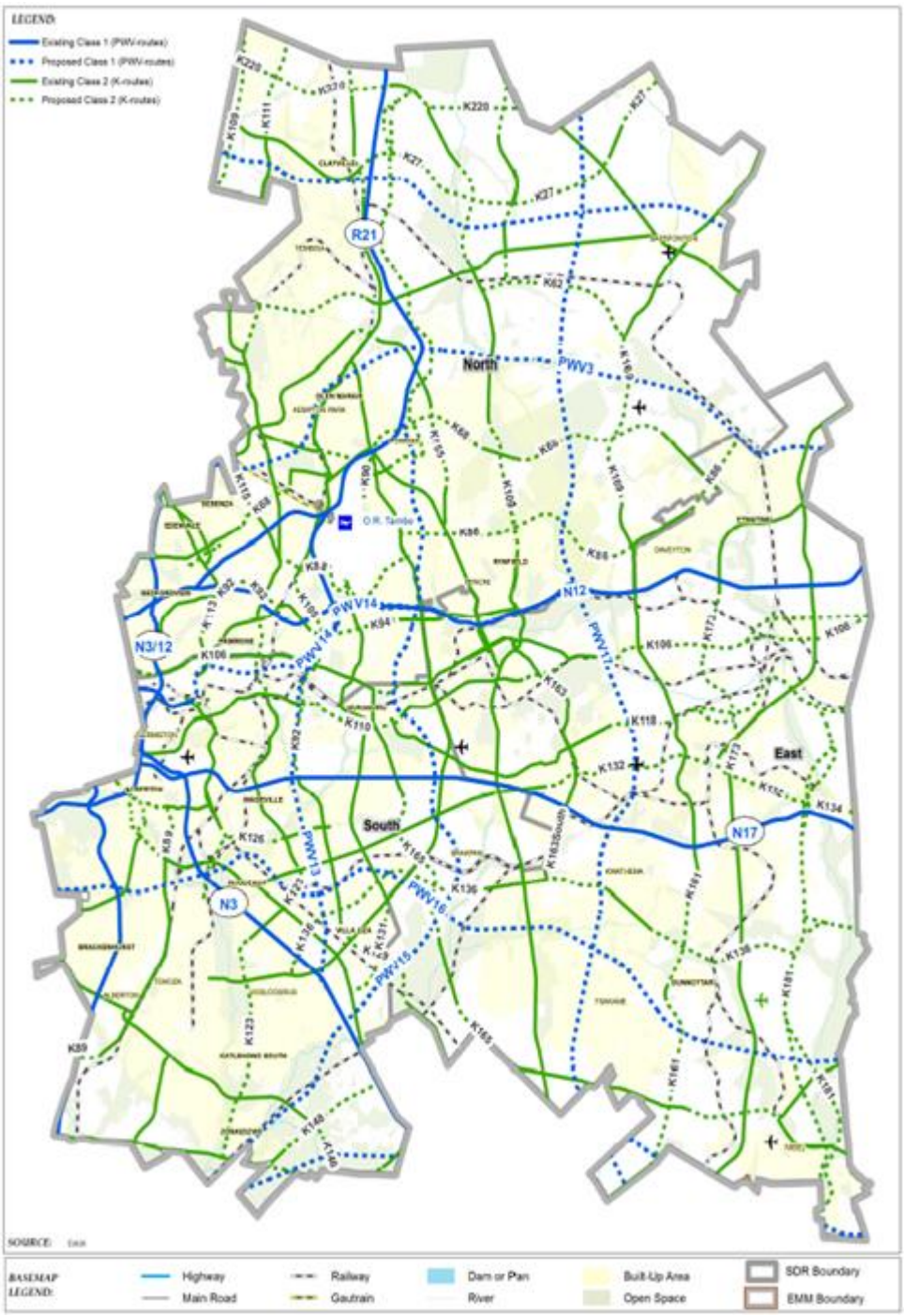
The EMM has unique transport and spatial features due to its historic development. One of the most important features of the Ekurhuleni Metropolitan Municipality (EMM) is its strategic location in Gauteng, South Africa and even Southern African context. It is located in the south-eastern quadrant of Gauteng Province and it represents the point of convergence of a number of national road and rail transport corridors which link the major urban centres and export harbours of South Africa to Gauteng Province. EMM has a Comprehensive Integrated Transport Plan which identifies transport challenges and needs, provides long-term strategies and plans and includes a five year program of priority projects. The CITP has been used to complete this section of the BEPP.

EMM's transport realities can be characterized by the following results obtained from a household travel survey conducted in 2013:

- ***Vehicle ownership*** - Sixty two per cent of households in EMM do not own cars, but the majority of households in the R6 000 and higher income groups own a private car. The mean car ownership per household is 0.59.
- ***Public Transport access*** - Some 24% of households in the EMM do not have access to any form of Public Transport, with the high-income areas with little or no access to Public Transport. Some 54% of households have access to only one mode of public transport.
- ***Expenditure on public transport*** **-** Some 13% of all households spend more than R1 000 per month on public transport.
- ***Trip Purpose*** - Most trips starting from home are going to work (45%), with almost the same proportion to education (43%), followed by recreation (4.6%) and shopping (4%).
- ***Mode of Transport*** **-** Walk and car shares are the highest and similar at 32%. Minibus taxis have the highest share of public transport at 22%, followed by train and bus at 5% each.
- ***Travel Time*** - Some 32% of all trips last between 16 and 30 minutes. Ekurhuleni East with 63 minutes has the longest travel time, followed by Katlehong (52 min); Vosloorus (51min) and Etwatwa Ekurhuleni North both on 50 minutes. Trains have the longest travel time at 80 minutes, followed by taxi at 58 minutes, bus at 55 minutes, cars at 40 minutes and walking at 31 minutes.
- ***Main origins and destinations*** -The most trips (88%) are made within EMM with only 12% exiting the area. A third of all trips are made within zones. The main destinations of the following origins are:
    - Alberton to Johannesburg to Tokoza to Katlehong
    - Benoni to Boksburg to Johannesburg to Katlehong
    - Germiston to Katlehong
    - Katlehong to Germiston to Alberton to Johannesburg
    - Kempton Park to Tembisa to Johannesburg
    - Springs to Kwathema to Tsakane
    - Tembisa to Kempton Park to Johannesburg to Tshwane to EMM North
    - Vosloorus to Katlehong

The EMM has an extensive road network, which consists of a hierarchy of national, provincial and municipal roads. EMM owns 81% of the road network in the municipality, Gauteng province owns 18% and SANRAL owns 1%. The region is well served by freeways running north-south and east-west, linking the EMM to the rest of Gauteng province, as well as providing mobility within the metropolitan area. These freeways, namely the N12, N17, N3, R21 and R24, carry the most traffic and are also the most congested. The figure below indicates the existing and current planned national and provincial road network of the municipality.

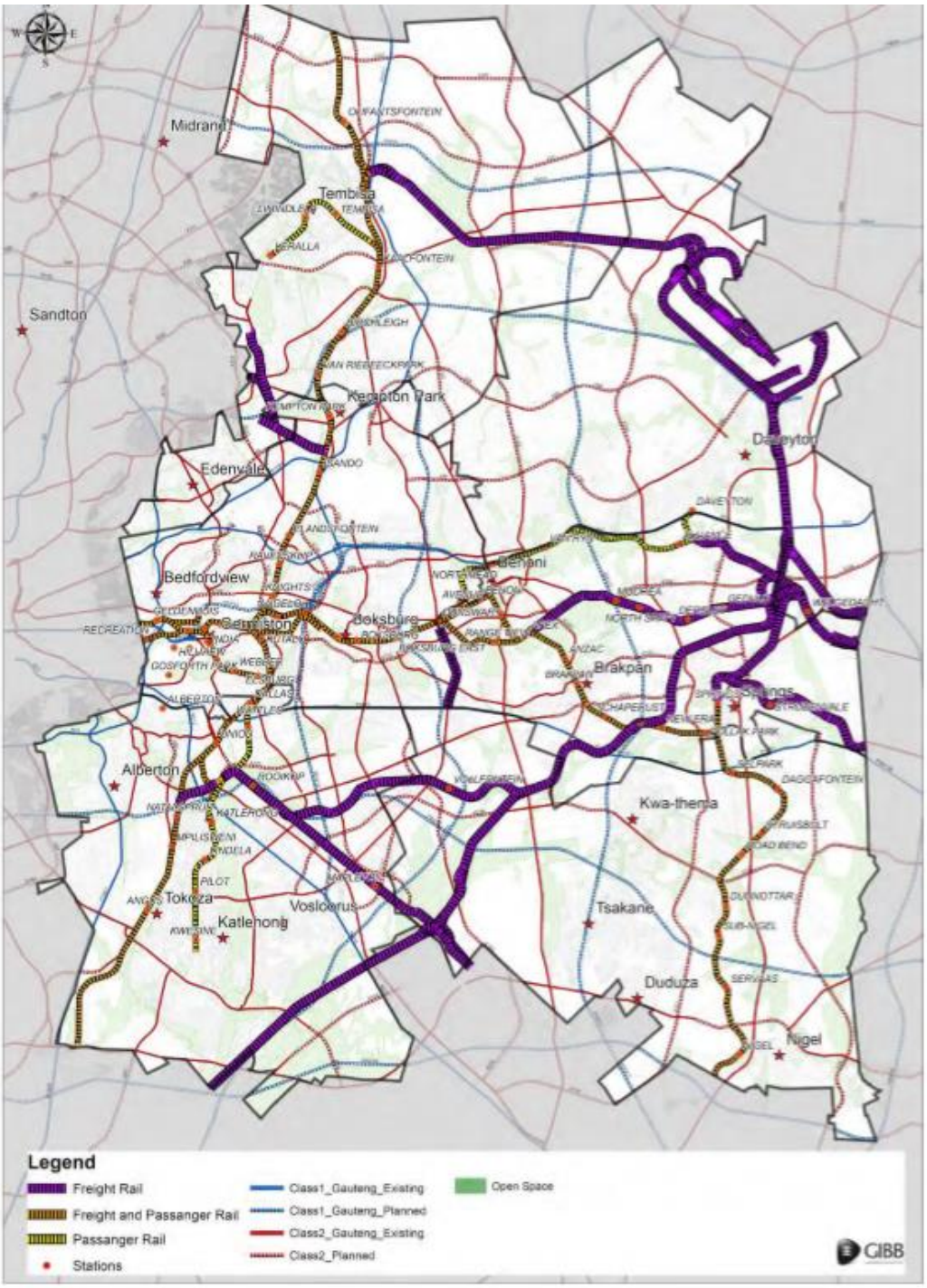
Figure B6.1: EMM Existing and Planned National and Provincial Road Network



(Source: EMM CITP 2013-2017.)

Furthermore, all the major national rail corridors in South Africa converge at the Germiston railway station in Ekurhuleni, which is also the largest railway station in South Africa. Ekurhuleni is served by a very good rail system consisting of the PRASA rail network, as well as Gautrain, linking Johannesburg and Tshwane to Kempton Park and ORTIA.

Figure B6.2: EMM Railway Network



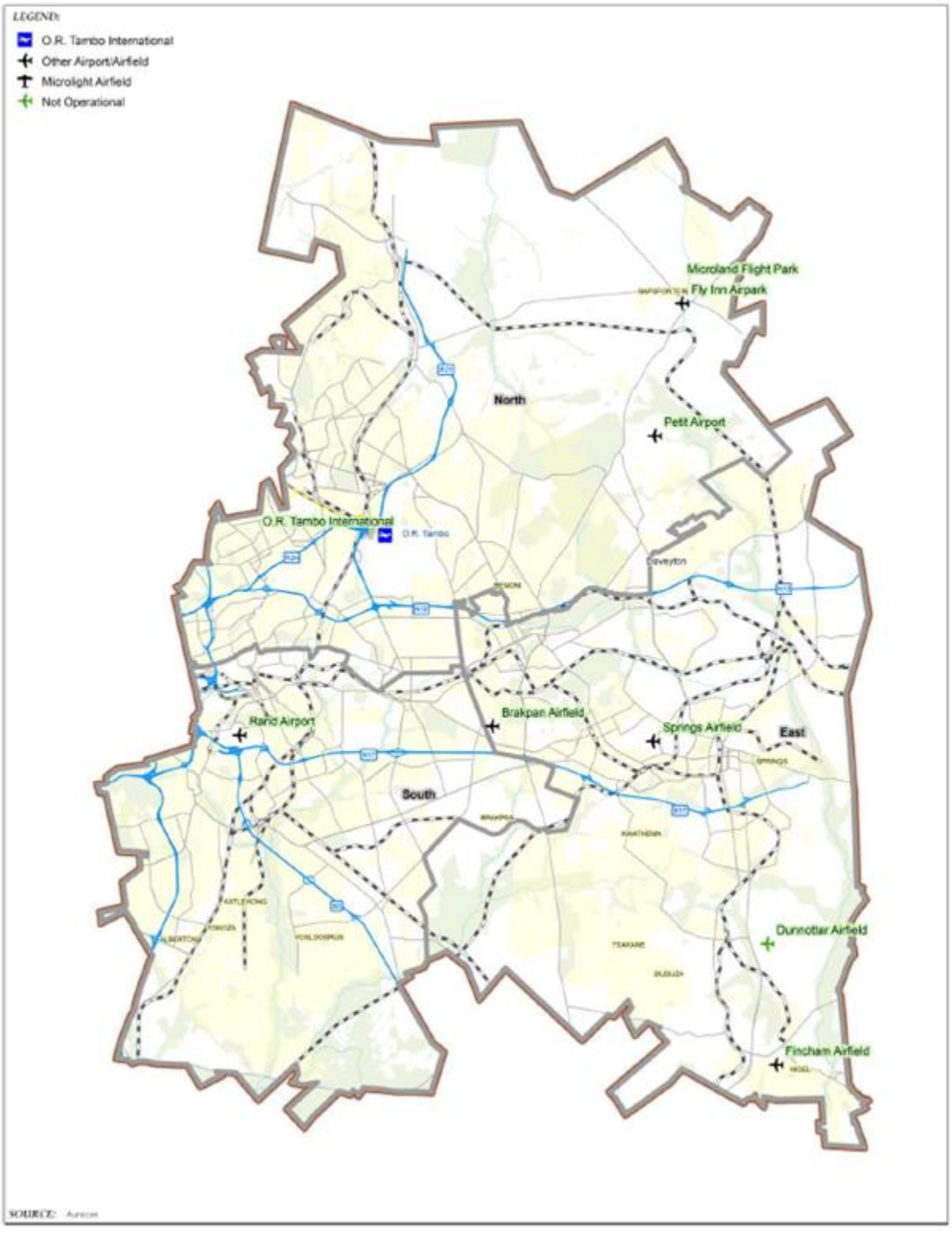
(Source: EMM CITP 2013-2017)

EMM forms part of the main economic hub in southern Africa and large numbers of freight tonnage pass through it by either rail or road. It is therefore important for EMM to become involved in facilitation improved freight operations in order to ensure the continued growth in the commercial sector of EMM and to protect the infrastructure on which the road-based freight movements and all other traffic must operate. Two major new developments incorporated into the freight strategy are the development of the Aerotropolis at the OR Tambo International Airport and the development of the freight hubs at Tambo Springs and Sentrarand.

The rail and road networks are also used to link previously disadvantaged communities in the low income residential clusters like Tembisa, the Katorus complex, the Kwatsaduza complex, and the Daveyton Etwatwa area to the main economy within EMM as they are far removed from the majority of social and economic opportunities.

EMM contains a large number of airfields in the area which range in size and function form one very large international airport hub (OR Tambo International Airport) to a number of very small private and unregistered airfields. The existing airfields and their relationship to the existing road system and the various CBD's in EMM area are shown in the figure below. The OR Tambo International Airport (ORTIA), by far the largest passenger and cargo airport in Southern Africa, is a very prominent feature in terms of the diversity and scale of secondary activities (manufacturing, warehousing etc). It attracts to the airport and its surrounding area, also known as the Aerotropolis.

Figure B6.3: Locations of Airports in EMM



(Source: EMM CITP 2013-2017)

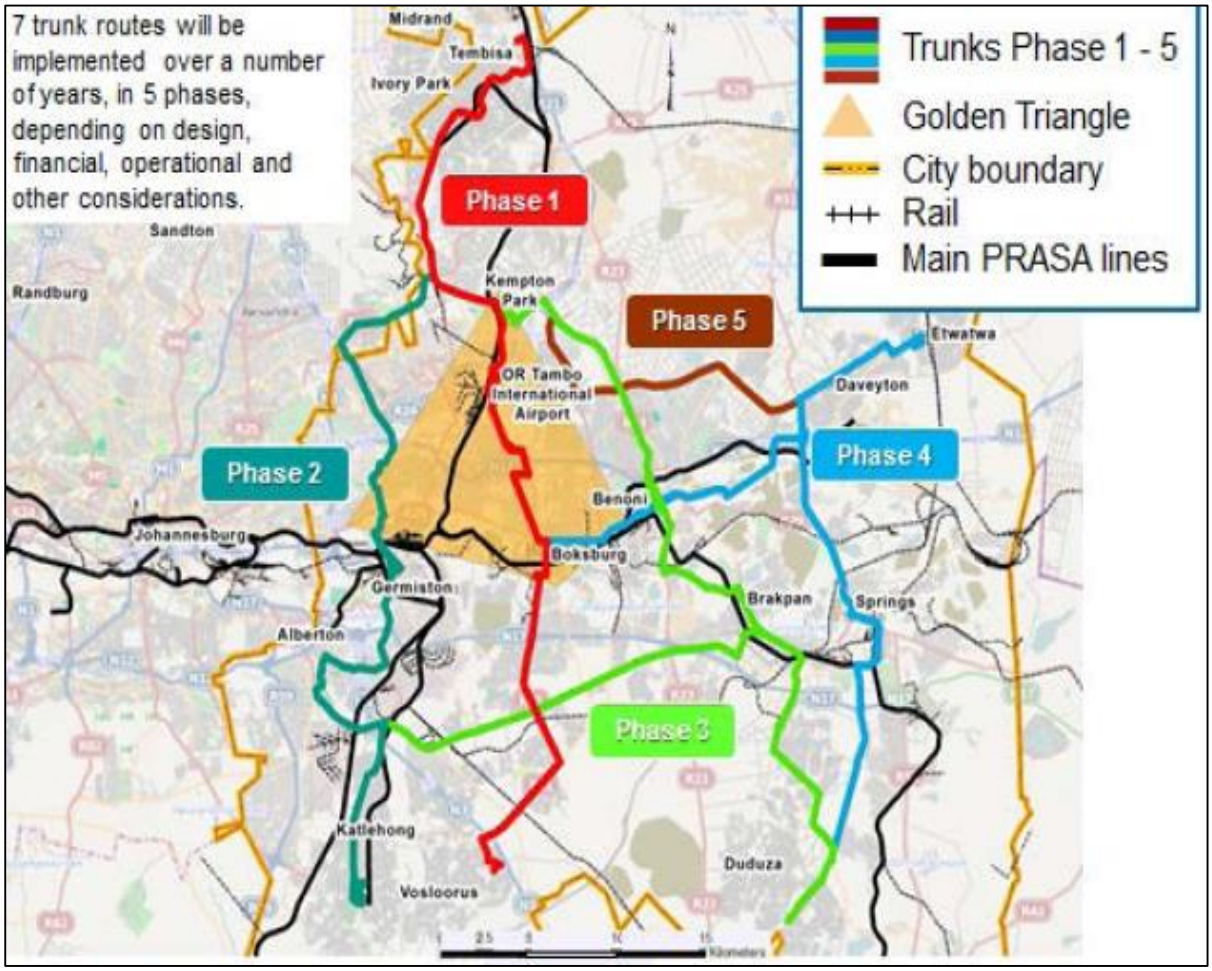
Typical problems experienced within the EMM transport system are dependency on the use of fossil fuels, continued growth in car ownership and traffic congestion resulting in air pollution impacting on global climate change, as well as increased traffic accidents. Urban productivity is highly dependent on the efficiency of its transport system to move labour, consumers and freight between multiple

origins and destinations. To address these problems a more sustainable public transport system must be developed in order to meet urban mobility needs and make Ekurhuleni a more liveable city. The focus of the public transport operational strategy is on the integration of the full public transport network, services and modes in such a fashion that passengers can move optimally from origin to destination in the area most effectively, in the shortest possible time and with the minimum of fare-paying transactions. A transformed transport system that is people oriented, sustainable and supports the economy of the EMM as well as Gauteng as a global city region, through the concept of transit orientated development is a priority for EMM. To serve this purpose, an Integrated Public Transport Network (IPTN) was developed indicating the main public transport routes and modal transfer stations, based on the following:

- Existing and proposed land uses according to the MSDF;
- The approved SPTN and other information obtained from the 2007 ITP;
- Existing taxi and bus routes;
- The IRPTN, including the BRT routes and their feeder routes, the commuter rail network and Gautrain;
- The existing major transport infrastructure; and
- Major economic nodes and future development areas, especially residential.

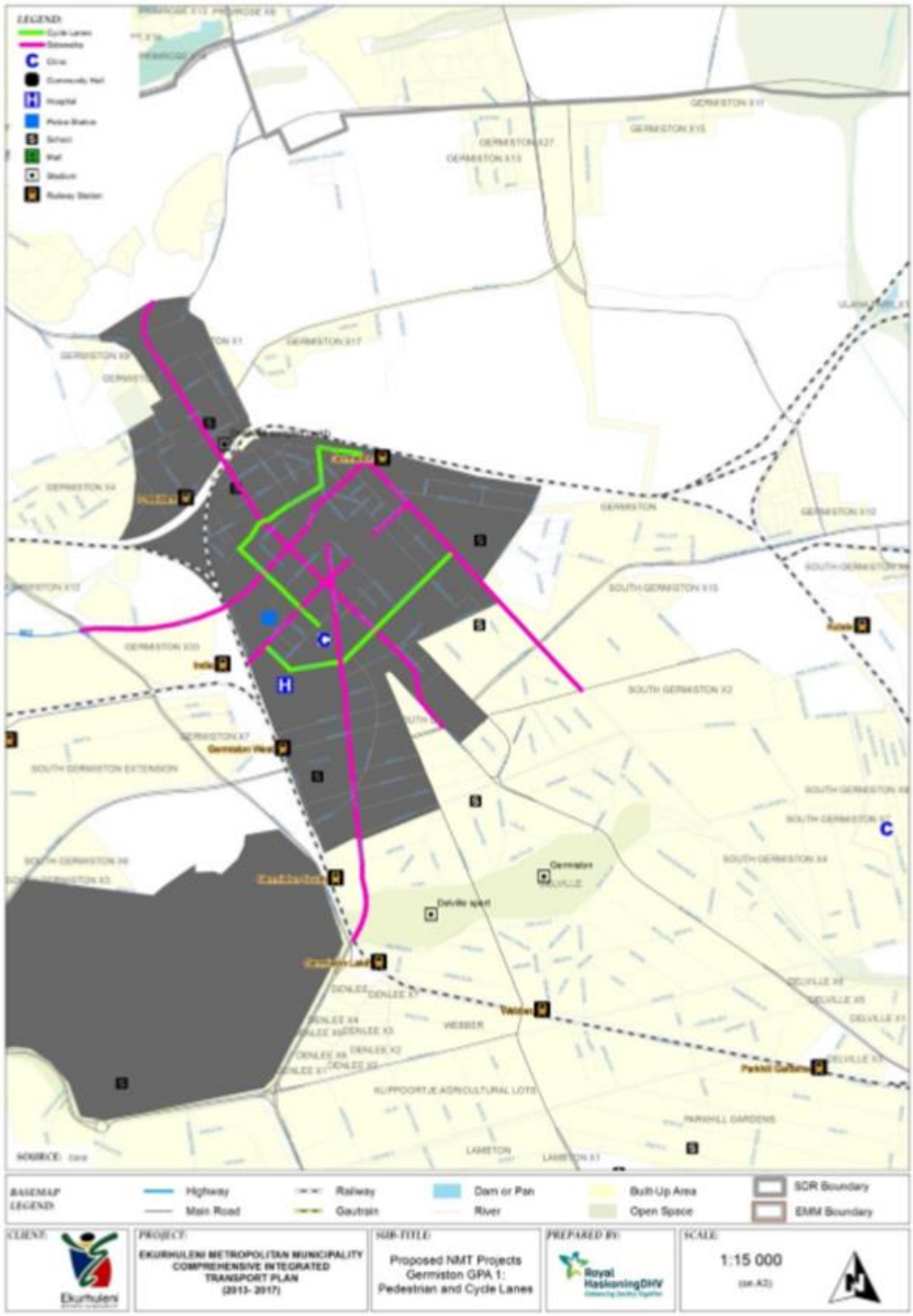
The Integrated Rapid Public Transport Network (IRPTN) Operational Plan is incorporated into the CITP and it is important that the plans stipulated in these documents are implemented. The IRPTN includes the rail network as well as the BRT network, which forms the mobility backbone of the IPTN. The IRPTN consists of seven BRT trunk routes that will be implemented in five phases. The trunk routes run along the major mobility spines in line with the MSDF, with feeder routes, ensuring significant area-wide coverage. These routes link the existing and proposed major residential and economic nodes of Ekurhuleni, providing equitable access to opportunities for all citizens. The highest priority route that will be implemented first is the Tembisa - Kempton Park - Vosloorus corridor, based on the very high public transport demand along this corridor.

Figure B6.4: IRPTN Routes



It should be noted that there is a very high need for NMT (Non-motorised Transport) facilities throughout EMM. It is therefore recommended by the CITP that EMM should develop an NMT policy and master plan to guide the implementation of NMT facilities throughout EMM. Such a policy should take into consideration the principles contained in the City of Johannesburg Complete Streets Design Guideline. Once the policy is adopted by Council, an NMT masterplan based on the policy should be drawn up that clearly shows the NMT implementation programme and budget requirements It is also recommended that the cycle route in Germiston CBD along Hospital street, Oosthuizen street, Rose street, Queen street, F H Odendaal street, Joubert street and Station street should be used as the pilot for cycle lanes in EMM. (indicate with green line in figure below) EMM should also undertake an awareness campaign to sensitise the public of the role of NMT as a key mode of transport.

Figure B6.5: Proposed NMT Priority Project in Germiston



(Source: EMM CITP 2013-2017)

Safe and secure transportation is fundamental to a city like EMM. According to the CITP, no guidelines currently exist for the preparation of a Safety and Security strategy and it indicates that further discussions and planning by the Guidelines Review Committee is necessary. In order to address the issue of road safety in EMM, it is recommended that the municipality commissions a Traffic Safety Plan (TSP), so as to constantly aim to decrease the number of fatalities and serious injuries from road accidents, through coordinated traffic safety initiatives.

In the CITP, the IRPTN have been used to prioritise the EMM's normal public transport infrastructure funding, which is focussed in specific areas. However, the wider public transport network should not be neglected. The normal maintenance of public transport facilities is done on a rather ad hoc fashion, and funding is also too limited to adequately address the needs of the users and operators. A facilities management system is needed as well as more funding to address these needs. It is recommended that:

- The EMM develops and implements a Facilities Management System to monitor the condition of facilities and prioritise limited funding.
- Additional funding for the maintenance and upgrading of facilities be investigated from the private sector, such as ranks fees, co-funding by retail owners linked to facilities, and PPP arrangements with developers to manage facilities forming part of developments.
- Infrastructure funding be prioritised and focussed along priority corridors to upgrade public transport on a corridor by corridor basis. The IRPTN, IPTN and CIF programs are following this approach and integration of these programs need to further refined in future
- The Roads Master Plan and IRPTN Operations Plan both updated the EMM's metropolitan transport demand model for their planning purposes. However, the current EMME/3 model must be recalibrated on the 2011 Census data as well as the 2013 Household Travel Survey data. All transport and public transport planning must be conducted by means of the one master model in order to achieve consistent results.

In summary, key sector trends and impacts on the City's spatial structure and form are:

B.7 TRENDS AND DEMAND FOR SUSTAINABLE DEVELOPMENT

According to the National Environmental Management Act (1998), sustainable development can be defined as follows:

"The integration of social, economic and environmental factors into planning, implementation and decision making so as to ensure that development serves present and future generations"

The National Strategy for Sustainable Development and Action Plan (NSSD1) 2011-2014, spells out South Africa's vision for a sustainable society as follows:

"*South Africa aspires to be a sustainable, economically prosperous and self-reliant nation state that safeguards its democracy by meeting the fundamental human needs of its people, by managing its limited ecological resources responsibly for current and future generations, and by advancing efficient and effective integrated planning and governance through national, regional and global collaboration*."

From the above highlighted definitions, it is clear that sustainable development does not single out the environment but includes the social and economic aspects of planning and development. Although, this section of the report will focus on the Natural / Green Infrastructure impacting on the EMM in terms of current and future development.

B.7.1 Natural / Green Infrastructures Supports and Constraints

The hydrological system in Ekurhuleni provides a strong and distinct natural spine to the open spaces located within the EMM. A key element in the vast hydrological network is the presence of the Ramsar Site in the Blesbokspruit. The hydrologic systems is vital when it comes to the biological and hydrological functioning of the area, therefore it must remain intact and disallow any further development.

As indicated within the Ekurhuleni Biodiversity and Open Space Strategy (2009). There are significant physical constraints to development in the EMM area that include elements such as shallow undermined, dolomite and wetland areas. On the other hand, the areas constraint by physicals elements for development, is advantageous for the establishment of an open space system within the EMM.

There are five environmental strategic tensions that the Growth and Development Strategy identified to be critical for the City. These relate to the mining legacy, extreme pollution, climate change, unsustainable natural resource use and degradation of eco systems. **Table B.13** is a brief summary of each element:

Table B7.1: Environmental Strategic Tensions

Elements	Description
Mining Legacy	• The mining legacy has left the EMM with limitations in regards to developable land due to acid mine water which continues to threaten human, plant and animal life, moreover the undermined and waste lands, coupled with mine dumps that have radio-active materials are not suitable for development without creative interventions.
Extreme Pollution	• Ekurhuleni faces challenges with regards to extreme pollution due to the vast number of industrial activities located within the municipal area. The high levels of pollution have negatively affected land, water and air resources. Creative environmentally friendly initiatives within the industrial

	sector will need to be effected to ensure the continued operations. • Significant parts of open space, especially the rivers in the area, are polluted or degraded and may require significant investment to get them back to an acceptable state
Climate Change	• Due to climate change, and the impact thereof, Ekurhuleni has to investment in environmental development and sustainable initiatives. The biodiversity and ecosystem of EMM has degraded due to the industrial and urban development within the municipality.
Scarcity of Natural Resources	• Ekurhuleni is confronted with the scarcity of natural resources in terms of water, soil, energy and waste. Without proper management, the scarcity of natural resources, will ultimately negatively impact on development within the municipality. • A total number of 1 3970 ha high potential agricultural land and 4 8170 ha moderate potential agricultural land has been identified within Ekurhuleni that should be preserved for agricultural purposes.
Degradation of eco systems	• The overall degradation of the eco system is concerning and need addressing.

The MSDF (2015) highlights that according to an environmental constraints assessment of the EMM, approximately **60%** of the municipality contains ecological important areas, sensitive surface and hydrological features, high potential agricultural land and/or potential pollution sources. The regions that are most affected by the presence of environmental constraints are Regions C and E. The region with the greatest opportunity for development, unhindered by environmental constraints, is Region B and in particular the areas of Kempton Park and Pomona.

The Critical Biodiversity Areas (CBA) within the bioregion are the portfolio of sites that are required to meet the region's biodiversity targets, and need to be maintained in the appropriate condition for their category. The appropriate conditions for each of the categories identified in the Ekurhuleni Metropolitan Municipality Bioregional Plan are as follows:

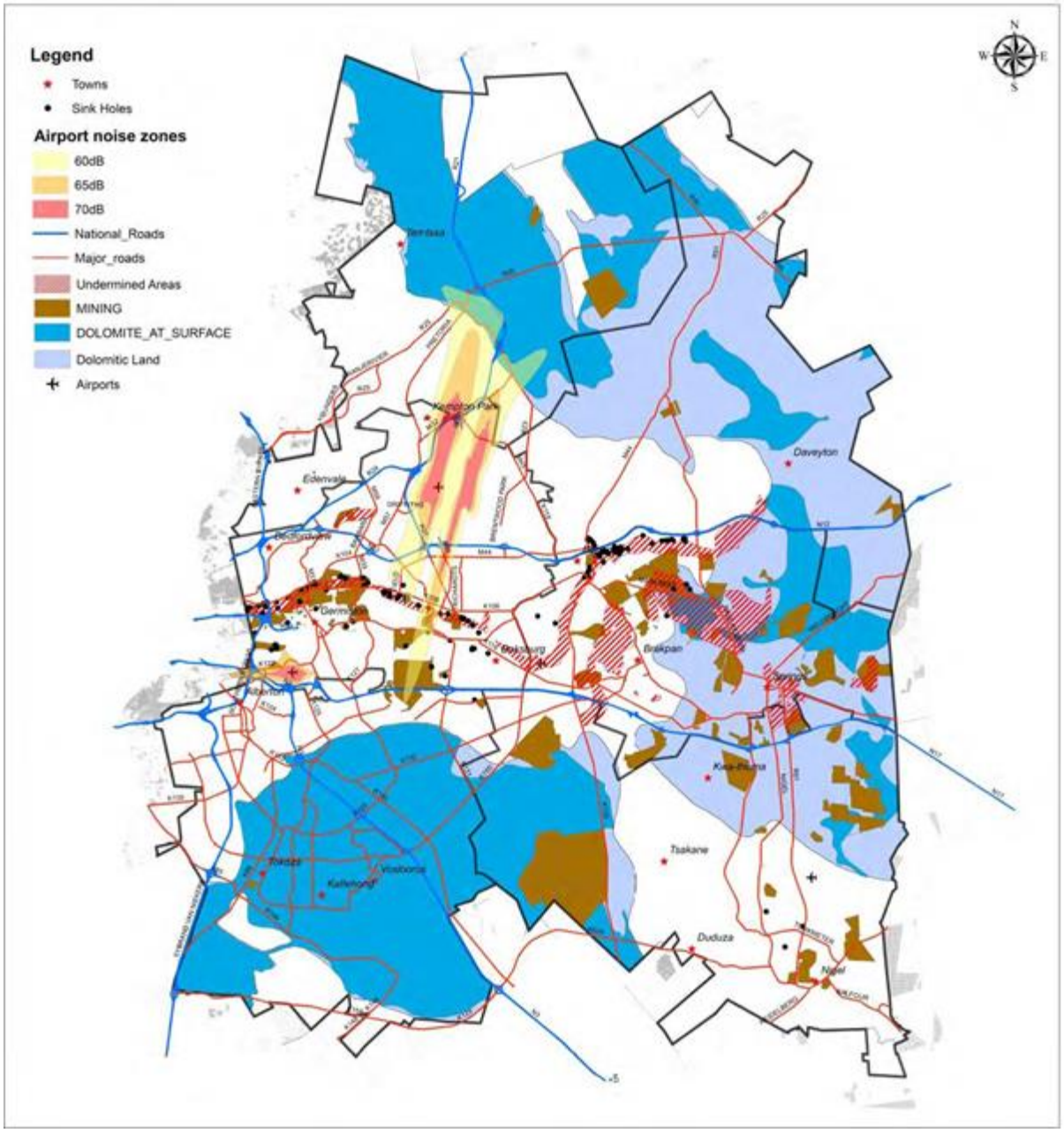
- **CBA 1: Areas which need to remain in a largely natural state;**
- CBA 2: Areas cultivated landscapes have importance for supporting threatened species;
- Ecological Support Areas (ESA) 1: Areas largely natural or near natural landscapes which should remain in at least (or be rehabilitated to) a functional state which are important for preventing degradation of Critical Biodiversity Areas and Protected Areas, and are particularly focussed on the maintenance of ecological processes (e.g.river buffers helping to moderate water flow during floods);
- **ESA 2: Transformed areas which nevertheless potentially retain some value for supporting ecological processes and where additional impacts on ecological processes should be avoided;**
- Protected Areas: Which include areas that are both proclaimed in terms of appropriate legislation and managed as protected areas, as well as areas that are either proclaimed or managed as protected areas;
- Other Natural Areas: Areas that still contain natural habitat but that are not required to meet biodiversity thresholds; and
- No Natural Areas Remaining: Areas which are identified in CPlan version 3.3 as having no remaining intact habitat.

A broad overview of the bioregional plan within the Ekurhuleni Metropolitan Municipality indicates that approximately 49% of the municipality contains either protected areas, natural areas or areas that are considered as being Critical Biodiversity Areas or Ecological Support Areas. The regions that contain the greatest percentage of Critical Biodiversity Area One, which are areas that need to remain in a largely natural state, are Region E and Region F (refer to **Figure B.25**).

Figure B7.1: Biodiversity Plan



Figure B7.2: Risk Areas within the Ekurhuleni Metropolitan Municipality



Areas identified as having environmental constraints will not necessarily negate any development from occurring, however, it will identify issues that will need to be considered prior to any development. Areas identified within the bioregional plan should be taken into consideration when planning new developments, as some areas are not suitable for development (e.g. conservation areas).

Through sustainability, the EMM strives to achieve a compact city with a protected open space system and bio-diversity area which sufficiently support higher density and mixed land use development within walking distance of an effective public transport network for all communities. The

public transport network should connect communities with all major job opportunities. Sufficient social and bulk infrastructure is needed to serve higher density areas on n high standard.

Job opportunity nodes need to be linked via the public transport network and the broader economic regions with the EMM by means of a hierarchy of regional roads, through routs, provincial routs, airports and a regional rail network.

B.8 IMPACT OF SECTOR TRENDS AND DEMANDS ON SPATIAL FORM

Table B8.1 is a summary of the key sector trend influencing the spatial form of EMM, and related possible solutions to the challenges identified. Additionally possible stokeholds in addressing the challenges the EMM face are identified.

Table B8.1: Summary of Sector Trends

CURRENT SITUATION	POSSIBLE RESPONSE	POSSIBLE STAKEHOLDERS
DEMOGRAPHIC		
• The expected population growth for the EMM places pressure on existing infrastructure, availability of land and job opportunities.	• Through focused integrated plans the necessary infrastructure, housing and job opportunities can be provided / created within the EMM to accommodate the expected population growth within the broader Gauteng / Global City Region context.	• Department of Labour • EMM Economic Development • EMM City Planning • EMM Department Roads and Storm Water • EMM Department Water and Sanitation • EMM Department of Human Settlements
ECONOMIC INFRASTRUCTURE		
• The EMM's economic characterised by growing unemployment and increasing job losses, especially in the manufacturing sector • In terms of employment, the economic sectors within the metro are not performing optimally due to the fact that the labour within these sectors are not competitive. • The informal sector is vital for the areas with very high unemployment and very low labour participation rates.	• Initiatives should focused on skills development, especially aimed at technical institution within the EMM aimed at manufacturing and engineering skills, especially with upgrading production. • The manufacturing sector should remain the key focus in terms of revitalising and expanding the metro's economy. • According to the EMM's MSDF[9] the metro, together with the input of local commerce, needs to propagate more widely the competitive advantage it has in its manufacturing sector and its good infrastructure for distribution. • In addition, areas such as the services sector, i.e. finance and business services, retail trade and warehousing, as well as downstream manufacturing sectors such as the chemicals (specifically pharmaceuticals and plastics), the metal production and metal works, and the transport and equipment (particularly air transport) sectors should be encouraged within the metro. • Areas that have been identified with potential area: ○ Industrial areas of Spartan, Isando, Jet Park, Olifantsfontein, Wadeville, Alrode and Dunswart, which currently contain the bulk of manufacturing and transport industries in the metro. ○ CBDs of Kempton Park, Boksburg, Benoni and Germiston, which contain the bulk of finance and local retail sector. ○ The retail trade sector should also be promoted within the Tembisa, Kathorus, Daveyton, Etwatwa and Kwatsaduza area.	• South Africa Department of Labour • National Department of Education • Gauteng Department of Education • NALEDI (National Labour and Economic Development Institute) • EMM Health and Social Development • EMM City Planning • EMM Economic Development • Department of Trade and Industry (SMME Development) • EMM Economic Development

[9] Source: EMM Metropolitan Spatial Development Framework: Review – 1st Draft April 2015

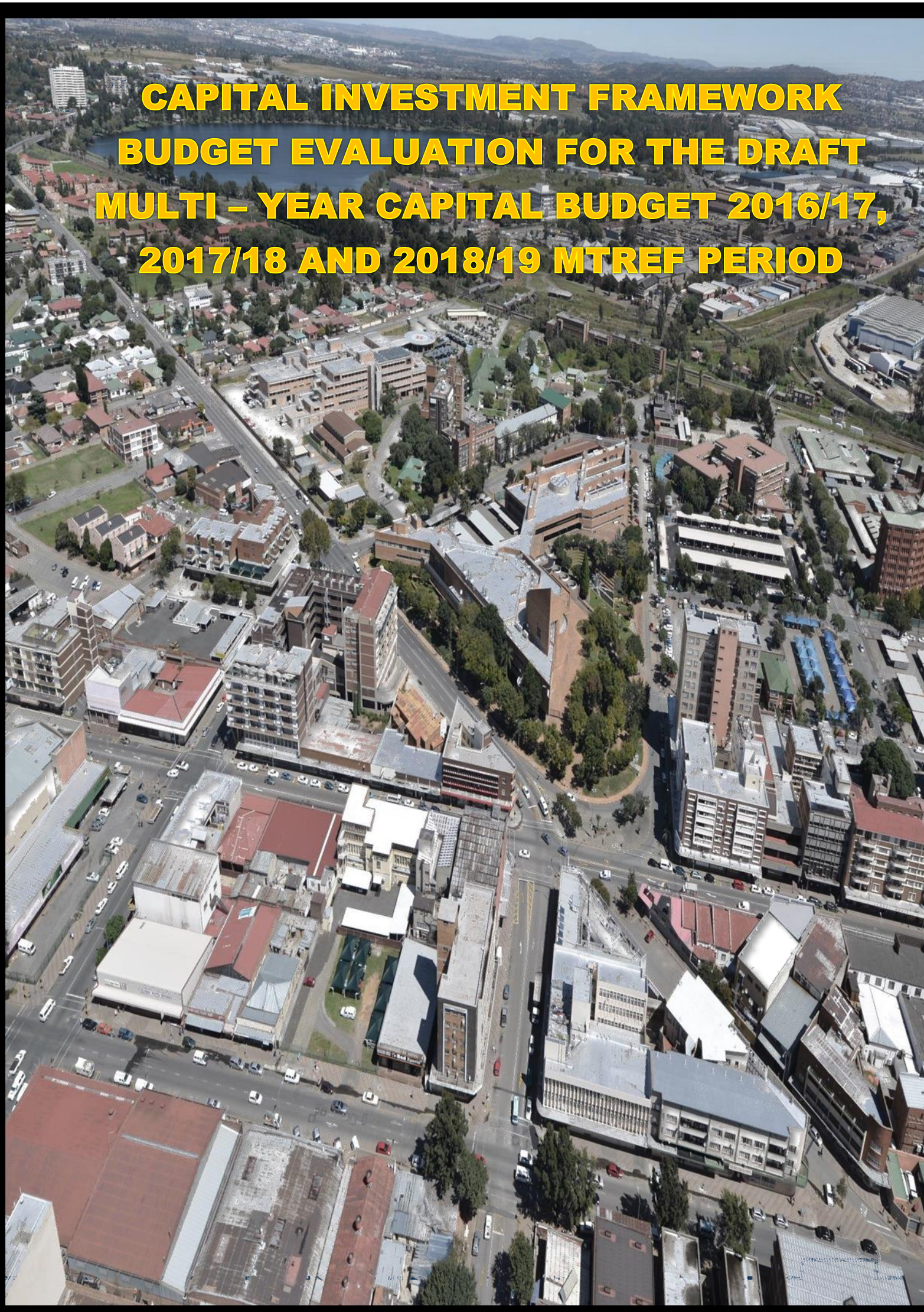
	• The second economy is largely untaxed, accounts for approximately 20% of the GDP and is grossly misunderstood. Within the second economy lies a vast opportunity in equalising a more sustainable tax revenue base. Therefore the benefits for the second economy needs to be enhanced and increased in terms of new developments and economic infrastructure expansion within the EMM. The following initiatives could be taken in creating increased benefits for the second economy: ○ Expanding and Strengthening Educational Programmes and Opportunities (Skills development) ○ Local Labour Promotion ○ SMME Development ○ Diversifying the Economic Base ○ Creating an Enabling Environment • The bulk of future growth within the EMM will need to intensify along an extended / broader centre corridor area from the R21 in the north through Germiston and Alberton, to the R59 and the N3 in the south. The most powerful development drivers are situated in this broader corridor environment. The current development driver include the Albertina Sisulu Corridor (R21), the O.R Tambo International Airport, the R59 Corridor and the N3 Corridor. The future primary development drivers include the Riverfields development, M&T / R21 development, Ekurhuleni Aerotropolis and the N3 / Tambo Springs development.	
BASIC INFRASTRUCTURE		
• Most of the EMM's basic infrastructure within the urban development boundary is at full capacity and in need of urgent upgrading. • No bulk infrastructure is available outside of the urban development boundary. • Funding short-fall.	• Compile a strategic, overarching, multi-sectoral, long term infrastructure plan to address the Aerotropolis development trajectory that the city has embarked on • Large investments to upgrade infrastructure is necessary. Investigation of funding strategies are important and it is necessary to emphasise the alignment of key planning instruments, to develop and implement a funding prioritisation system, continue to exert more centralised control over budget allocations and to synchronise the roll-out of the capital programme. • The infrastructure requirements should be prioritised according to areas with the greatest influence. • Council should embark on a continuous programme of optimisation of asset portfolios to obtain best value for money. • Maintenance of infrastructure must receive urgent attention. • It is important to also focus on strategies/programmes to reduce the current loading on existing infrastructure such as water conservation strategies, reduction of stormwater ingress	• Rand Water • ERWAT • ESKOM • EMM City Planning • EMM Department Roads and Storm Water • EMM Department Water and Sanitation

	in the sewer network, renewable energy programmes, public transport and solid waste recycling projects.	
RESIDENTIAL INFRASTRUCTURE		
• The total housing backlog for the EMM (including informal, backyard, hostels and waiting list units) is estimated at ***449 507 units.*** • Most of the household within EMM is located within Tembisa, Katlehong, Germiston and Boksburg.	• Future housing developments should ideally be at higher densities (due to limited availability of land) and at accessible localities, preferably along the public transport corridors and at activity nodes, promoting the TOD concept (limiting peripheral urban growth). • A variety of housing densities and typologies should be encouraged to permit a mix of incomes and housing types along the public transport corridors and at activity nodes. • Future developments should be approached holistically, promoting economic viability, environmental sustainability, social resilience and quality of life. • Future housing developments should include supportive uses such as community facilities, local business, parks and open space, recreation and entertainment facilities. • Housing proposal per type: ○ **Township** - In low income areas focus should be on the provision of social and municipal infrastructure, as well as the aesthetic upgrading of the area. Residential densities should be directed to support secondary and tertiary activity nodes and corridors without over-utilising existing service infrastructure. ○ **Suburbs -** In medium and high income areas, focus should be on the maintenance of infrastructure in these areas. Residential densities should be directed to support secondary and tertiary activity nodes and corridors without over-utilising existing service infrastructure. ○ **Informal Areas Upgrading -** Informal areas (squatter areas) are to be upgraded, formalised, or relocated as per EMM housing plans.	• EMM Health and Social Development • EMM City Planning • EMM Department of Human Settlements • Gauteng Department of Human Settlements • Rand Water • ERWAT • ESKOM • Private Sector
COMMUNITY INFRASTRUCTURE		
• Numerous social and community facilities are needed within the EMM. • Region F is most in need of social and community facilities, with an emphasis on education facilities.	• As per identified demand within the MSDF 2015, additional social and community facilities need to be provided within the different regions. • Due to limited funding, a prioritisation model approach should be applied to determine which social / community facility to provide first per region per a communities need.	• EMM City Planning • EMM Health and Social Development • Gauteng Department of Education • Gauteng Department of Health
TRANSPORTATION INFRASTRUCTURE		
• The transportation system in EMM is far from sustainable and	• Investigate all possible funding strategies to ensure sufficient funding is available for major	• SANRAL • Gauteng DRT (five year road

the public transport operational strategy is therefor of utmost importance. • A very high need for NMT (Non-motorised Transport) facilities throughout EMM is identified, in line with the TOD concept. • Funding short-fall.	road upgrades, normal maintenance of public transport facilities. • Develops an overload control strategy to minimise the implication on highway maintenance. • Facilities Management System needs to be implemented to address the need of the public transport users. • Travel Demand Management needs to be implemented to help alleviate traffic congestion, promote public transport and NMT modes. • EMM needs to develop a NMT policy and master plan to ensure sustainable implementation of NMT facilities.	priorities in terms of funding and implementation).
SUSTAINABILITY INFRASTRUCTURE		
• Approximately 49% of the municipality contains either protected areas, natural areas or areas that are considered as being Critical Biodiversity Areas or Ecological Support Areas which need to stay in a natural state. • The mining legacy of the EMM impacts on future development due to the prevalence of acid mine water.	• Future planning should incorporate environmental protection areas into developments, thereby meeting the national biodiversity protection targets for vegetation types in the area, and ensuring that natural areas are protected, maintained and utilized. • Promote the development of open spaces in a way that will ensure adequate access to a variety of types of open spaces within the EMM to all, that will fulfil the physical and psychological needs of the community • Rehabilitate mining land were possible to create additional land area for future developments and / or preserve historical mining sites as possible tourist attraction. • The inclusion of cultural and heritage elements within the open space network / protected areas can add to the viability of these areas, as noted within the MSDF the historical, cultural and tourism sites within Ekurhuleni include old mining sites, cemeteries, monuments and memorials, railway sites, Late Iron Age sites, museums and cultural villages, cinemas and nature reserves. There are a total of 266 heritages, cultural and tourism sites within the 5 regions.	• EMM City Planning • EMM Environmental Resource Management and Development • EMM Sport, Recreation, Arts and Culture • Department of Tourism • Department of Environmental Affairs

Annexure 6 – Capital Investment Framework Budget Evaluation for the Draft Multi-Year Capital Budget 2016/17, 2017/18 and 2018/19 MTREF Period

CAPITAL INVESTMENT FRAMEWORK BUDGET EVALUATION FOR THE DRAFT MULTI – YEAR CAPITAL BUDGET 2016/17, 2017/18 AND 2018/19 MTREF PERIOD



CONTENT

1. Background
2. Purpose
3. Budget Evaluation Implementation and Participation Process Followed
    a. CPM weighting System Departmental Readiness Workshops
    b. Mapping departmental projects from the multi-year budget
    c. Task Team Evaluation of the draft Multi-year Budget
    d. Departmental Capital Budget Evaluation: One on one departmental Engagements
4. Analysis of the CIF Evaluation Process
    a. Methodology
5. Analysis of Findings
    a. Analysis based on the CIF project categories
    b. Analysis based on the CIF geographic priority areas
    c. Analysis of budget per CIF project category and per geographic priority area
    d. Further refinements to the budget
6. Concluding Remarks

1. BACKGROUND

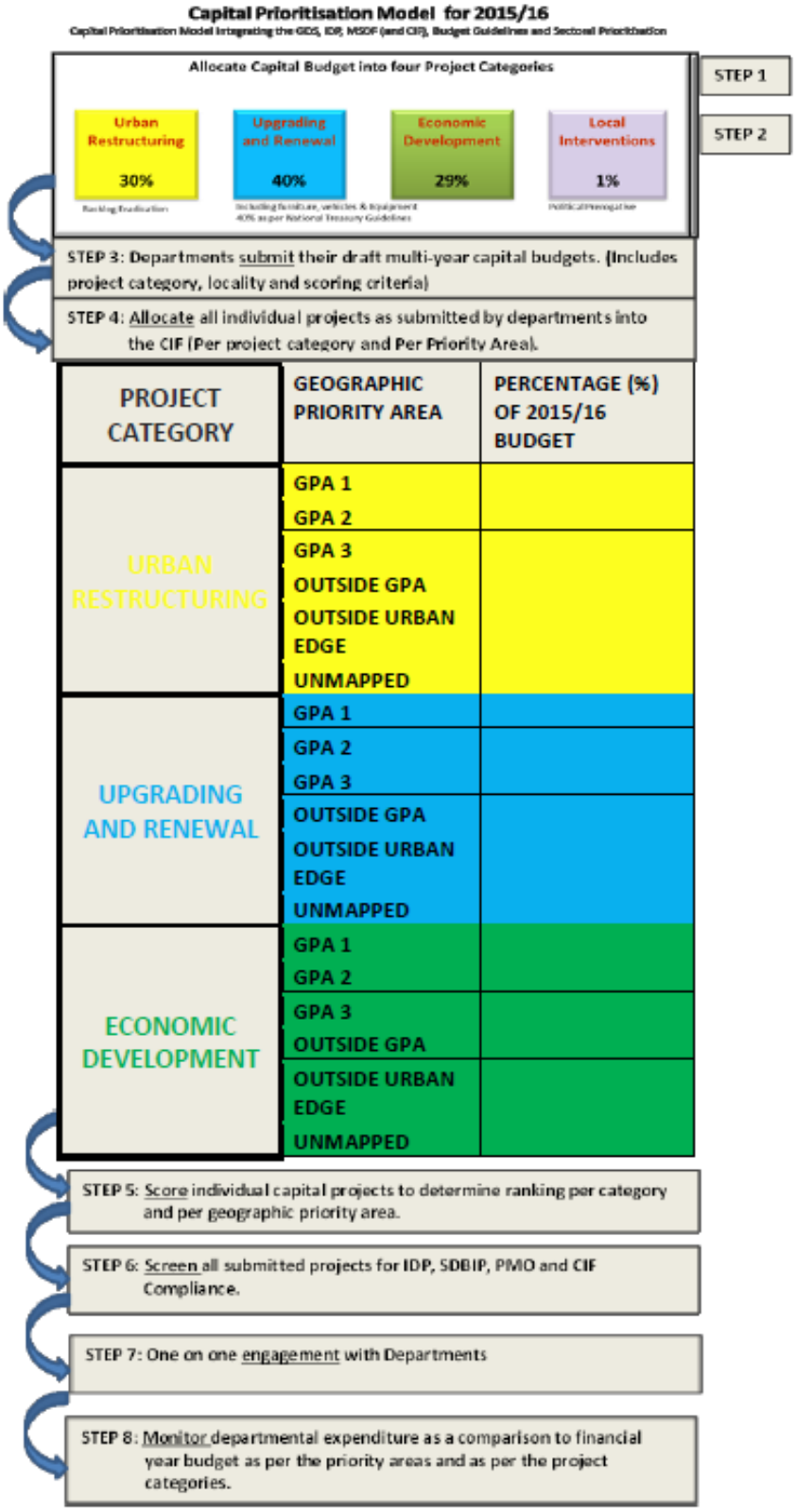
The drafting of the Capital Investment Framework (CIF) as a component of the Metropolitan Spatial Development Framework is a requirement in terms of Section 4(e) of the Municipal Planning and Performance Management Regulations, 2001 as promulgated in terms of the Municipal Systems Act. The CIF also fulfills the function of a Capital Expenditure Framework (CEF) as required in terms of Section 21(n) of the Spatial Planning and Land Use Management Act, 2013. The purpose of the CIF is therefore to strategically and spatially guide, align and co-ordinate municipal capital expenditure across all sectors that will make provision for balanced spending of the municipal budget so as to promote economic growth and meet the infrastructure and services needs of the Ekurhuleni Metropolitan Municipality (EMM) residents.

The CIF can also be defined as a financial planning and regulatory tool in terms of the National Development Plan, which plan makes reference to the need to achieve spatial transformation through targeting investment into strategic spatial areas through the combined use of planning, legislative and financial tools. The CIF is therefore geared towards providing a spatial rational to the budget in order to start guiding investment into identified priority spatial areas as a means to achieve positive spatial transformation.

The CIF comprises of two key implementation tools being the Capital Prioritization Model and the Geographic Priority Areas.

The capital prioritization model is an instrument utilized in the implementation of the CIF in alignment with the annual budget process set out by the EMM Finance Department in order to strategically prioritize the multi-year capital budget. The CPM as illustrated in the below figure strives to align and incorporate project management, IDP needs analysis, and the SDBIP into the prioritization process, incorporates the geographic priority areas in providing for a spatial rationalization of the budget, establishes a set process for implementation as aligned to the budget process, and guide and familiarize departments with the capital project prioritization process and requirements.

DIAGRAM 1: CAPITAL PRIORITIZATION



The CIF geographic priority areas are geared toward guiding the spatial prioritization of departmental projects with the objective to achieve targeted investment into specific areas in order to promote spatial transformation. The geographic priority areas is made up of the spatial structuring elements outlined within the 2011 approved MSDF, and comprises of 3 priority areas as per the map below and is aligned to the development trajectory set out in the Growth Development Strategy in terms of achieving a '**Delivering City**' with a 10 year implementation horizon (***Priority area 1 – annotated in Blue***), a '**Capable City**' with a 10 year implementation horizon (***Priority area 2 – annotated in yellow***), and a '**Sustainable City**' with a 20 year and beyond implementation horizon (***Priority area 3 – annotated in green***).

MAP 1: CIF GEOGRAPHIC PRIORITY

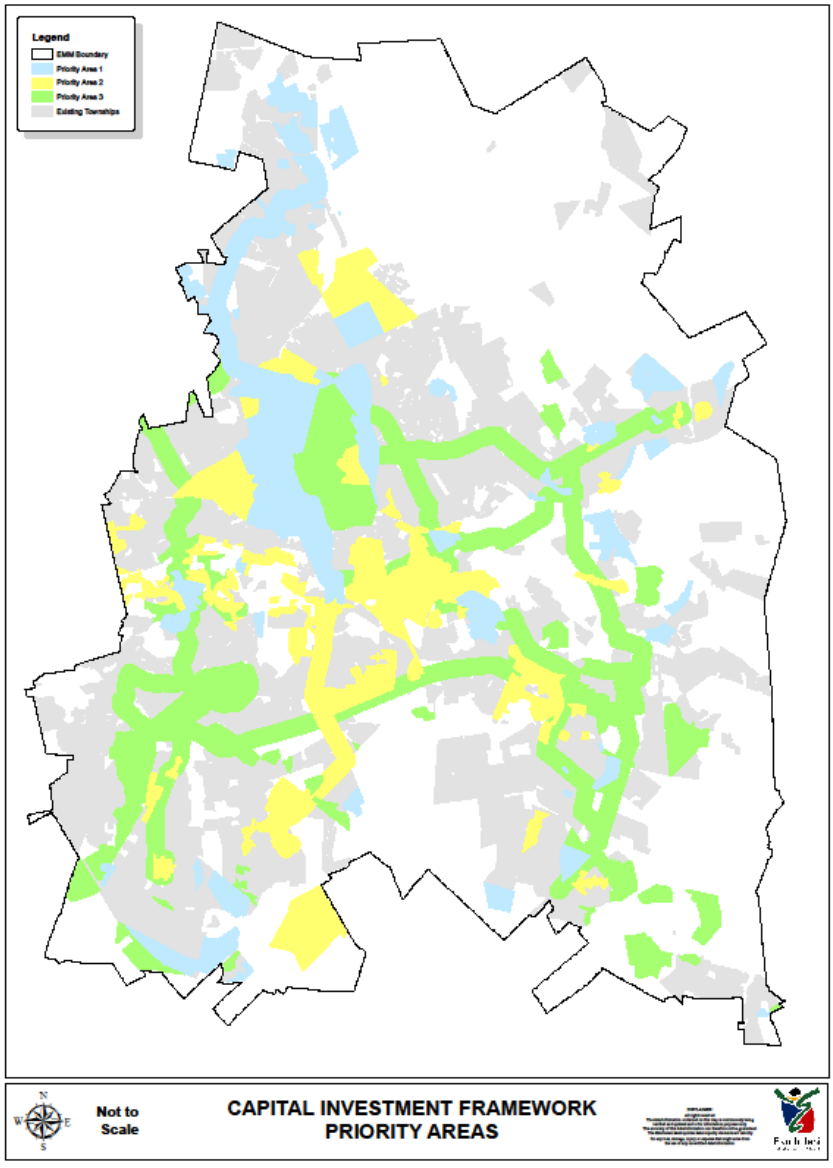
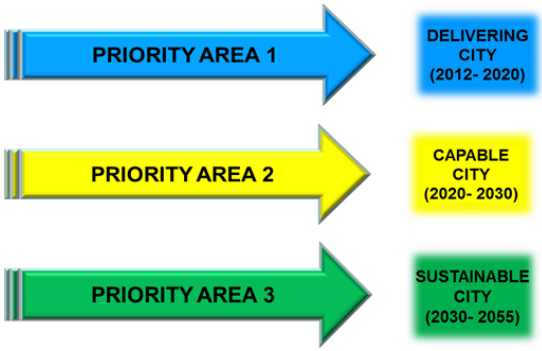


DIAGRAM 2: CIF GEOGRAPHIC PRIORITY AREAS AS ALIGNED TO THE GDS



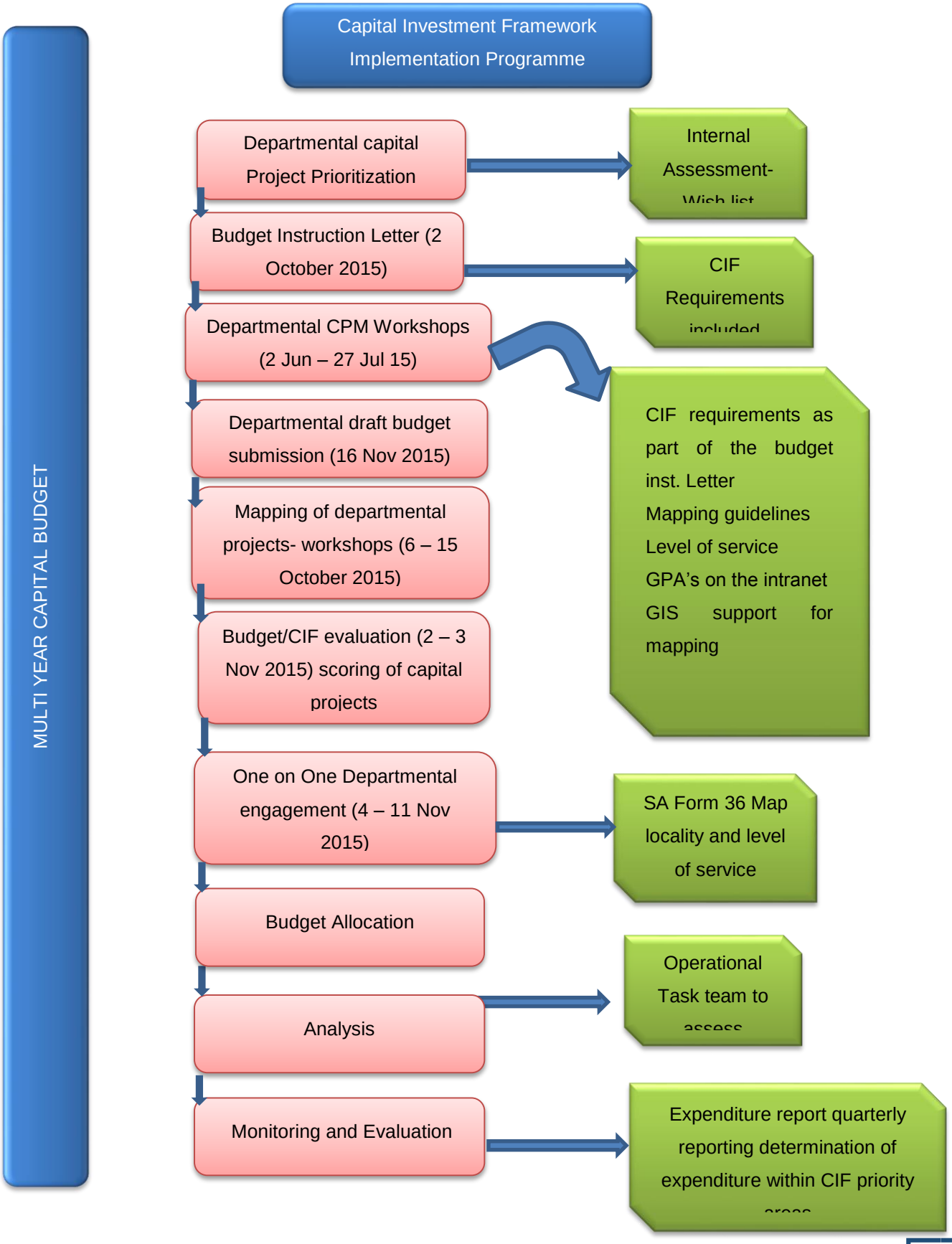
The CIF process has been aligned to the annual budget evaluation since the 2013/14 financial year and has taken on an approach of test, guide and align in gradually introducing the CIF priority areas as a guide the spatial prioritization of the budget. The objective is therefore to strengthen and encourage departmental budgeting in alignment with the geographic priority areas (MAP 1) and in achieving the development strategy for the EMM as outlined with the Growth and Development Strategy 2055.

2. PURPOSE OF THE REPORT

The purpose of the report is to provide feedback in terms of the impact of the CIF as part of the annual budget evaluation process. The impact of the CIF will be outlined in the report in terms of the participation process, affected changes to the budget, and assessment of the draft multi-year capital budget against the project categories and geographic priority areas.

3. BUDGET EVALUATION IMPLEMENTATION AND PARTICIPATION PROCESS FOLLOWED

Budget Evaluation Process overview



a. Work shopping the Capital Prioritization Model weighting system with Departments

Purpose: To educate departments about the updated Capital Prioritization Model scoring manual, This lead by City Planning in conjunction with the consultants Demacon

Workshop dates and attendance:

DEPARTMENT	DATE (PROPOSED)	TIME SLOT	LOCATION	MEETING DATE	Attendees
EPMO	**27-May-15**	**9:00 - 11:00**	**Germiston**	2-Jun-15	Nokwazi Ndlela, Phila Madondo
Strategy and Corporate Planning	**27-May-15**	**11:30 - 13:00**	**Germiston**	10-Jun-15	Bheki Sithebe, Peter Tholo, Dawie Maree
Health and Social Dev	**27-May-15**	**14:00 - 16:00**	**Germiston**	3-Jun-15	Mylle Sekoate, Lynette Potgieter, Eunice Steenkamp, Jaco Britz, Michael Diale, Audrey Pila
Water and Sanitation	**1-Jun-15**	**8:30 - 10:30**	**Kempton Park Civic**	22-Jun-15	Asanda Majova, Dumisani Gubuza, Nico van den Berg, Danie van der Merwe, Francis Bacon, Gerhard Esterhuisen, Mthokozisi Mlotshwa
Roads and Stormwater	**1-Jun-15**	**11:00 - 13:00**	**Kempton Park Civic**	3-Jun-15	Jaco Du Plooy, Nico Nell, Muzi nkonyane, Marius van Huyssteen, Nape Seopela, Sugar Ngcobo
Economic Development	**1-Jun-15**	**14:00 - 16:00**	**Kempton Park Investment Centre**		
Energy	**3-Jun-15**	**08:30 - 10:30**	**Boksburg**	9-Jul-15	Robin Crous, Vinent Kaiser, Ronald Ndou, George Mokone, Nonhlanhla Kgomo, Jabulile Kgomo, Mabeane Matjokotja, Lucky Radebe, Fred Fryar, Serutle Ntlatleng
SRAC	**20-Aug-15**	**11:00 - 13:00**	**Edenvale/Boksburg**	20-Aug-15	Rico Reyneke, Mpho Mukondeleli, Derrick de Beer,
DEMS	**21-July-15**	**14:00 -**	**Bedfordview**	**21-Jul-15**	Sanmarie

		16:00			Briedenhann, Anthony Kesten, Danie de Bruyn, Mandla Mnyandu, Louis, Esterhuizen,Previn Govender, Ofentse Masibi, Ryno van Vuren, Teboho Mokoena, Babalwa Jakula, Linda Mabaso
Environment	**9-Jun-15**	**08:30 - 10:30**	**Kempton Park**	6-Jul-15	Elsabeth van der Merwe, Stewart Green, Patricia Sithebe, Cecilia Rakgoale, Lilian Kwakwa, Martha Mahlobo, Freddie Aucamp
Real Estate	**9-Jun-15**	**11:00 - 13:00**	**Kempton Park**	**27-Jul-15**	Henri Nel, Barata Pitso, Siphiwe Ndlela, Ron Naicker, Gcobisa Ndandani, Themba Tshabalala
Transport	**9-Jun-15**	**14:00 - 16:00**	**Kempton Park**	15-Jun-15	Philip du Plessis, Omar Shariff Cupido
Finance	**11-Jun-15**	**TBC**	**Kempton Park**	9/21/2015 (Ops Task Team)	Lovedalia Selabe, Hannes Dednam, Tshepo Mofokeng, Kevin Homu
Spatial Planning	**17 June 2-15**	**14:00**	**Corporate Office**	17-Jun-15	Gerard MacCarron, Lebo Radebe, Ntswaki Matlou, Martin Bekker

b. <u>Mapping departmental projects from the multi-year budget</u>

Purpose: To capture locality of each capital project in order to help department's prioritize spatially.

Objective:

Based on comment received from departments on the previous year's mapping exercise it was requested that the mapping workshops comprise of smaller groups to prevent unnecessary waiting and to make allowance for individual departments to have more time with the allocated GIS support. In this regard 4 mapping workshops were made available as opposed to the former three workshops. Departments were further scheduled to meet with the GIS for either the morning or afternoon session.

The overall objective and purpose of the mapping exercise was to meet National Treasury requirements and assess departmental project alignment with the CIF by mapping the department's capital projects for the 2015/16, 2016/17 and 2017/18 draft multi-year budget.

Mapping Session Workshop Dates (2015):

DATE	DEPARTMENT	SESSION	ATTENDANCE	NOTES
7-Oct-15	Water and Sanitation	9:00 - 13:00	Lubabalo matakane	
	Transport	9:00 - 13:00	Philip Du Plessis Thomas Chango	
8-Oct-15	Roads and Storm-water	9:00 - 13:00		
	Health and Social Development	9:00 - 13:00	Jaco Brits Michael Diale	
	DEMS	9:00 - 13:00	Louis Esterhuisen Xolani Sibanyoni	
9-Oct-15	Energy	9:00 - 13:00	Vincent Kaiser George Mokone Andre Coetzee	
	Environment	9:00 - 13:00	Sthembile Pasiya Sekhonyana Lerotholi	
	Fleet Management	9:00 - 13:00		
12-Oct-15	Human Settlements	9:00 - 13:00		
	Economic Development	9:00 - 13:00		concession made to include Energy on 12 Oct 2015
13-Oct-15	Real Estate	9:00 - 13:00	Thando Miti	
	Waste Management	9:00 - 13:00	Siphamandla Masondo	
	SRAC	9:00 - 13:00	Rico Reyneke Derrick De Beer	
14-Oct-15	ICT	9:00 - 13:00	Solly Cave Portia Matsena	
	EMPD	9:00 - 13:00	Madeline Bloemhof	

	CRM	**9:00 - 13:00**	**Edwin Mokgatswana**	
15-Oct-15	**Supplementary Slot**	**9:00 - 13:00**	**Nico Nel Pontsho Menu Nape Seopela Robert Mabe Lubabalo Matakane Evelyn Phokwane Gerhard Esterhuisen Jabulile Kgomo Namhla Rulumeni**	**appointments only on request by departments for 15 Oct**
				Concession made to accommodate Water and Sanitation on 15 Oct
				Concession made to accommodate Roads and Storm-water on 15 Oct

c. CIF Operational Task Team Evaluation of the draft Multi-year capital Budget

Purpose: To show rationalization of the budget, for key departments to pre-evaluate the budget, identify issues, points of issues and prioritization of the budget before engaging with the departments.

Objective:

In terms of the budget process it was required that the draft departmental Capital project budget submission be assessed per department between from 02 to 03 November 2015 by the ratified CIF Operational Task Team. The Operational Task Team comprised of Finance, EPMO, Economic Development, Human Settlements, Environmental Resource Management, Real Estate, Strategy and Corporate Planning, and the City Planning Department. The Economic Development Department did not partake in the 2015 CIF/Budget evaluation process. The budget evaluation process included the prioritization of projects in terms of alignment with the Capital Investment Framework. The aforementioned key departments identified for participation in the evaluation process met as a unit to run through the draft multi-year capital budget in order to assess the departmental projects, and alignment of departmental budget requirements with the EMM spatial vision and available budget allocation. From City Planning's side the evaluation was based on the CIF geographic priority areas

and testing of the capital prioritization modes scoring system which takes into cognizance project locality in terms of the priority areas.

The following evaluation criterion is taken into account during the CIF/Budget Evaluation Process:

- Changes in the budget
- Changes in funding per financial year
- Locality
- Project status (readiness)
- Alignment with the IDP and ward prioritized needs
- Compliance with environmental legislation

Task Team Evaluation dates and Attendance:

WORKSHOP	DEPARTMENTS	DATE	Attendees
Workshop 1	Finance, Strategy and Corporate Planning, Environmental Resource Management, Human Settlements, EPMO, Real Estate and City Planning	02 November 2015	Pieter Swanepoel, Carmen Paulsen Wayne Maluleke Mpho Mosekedi Thembeka Nxumalo Nokwazi Ndlela Lovedalia Selabe Lilian Kwakwa Godfrey Hiliza Philip Viljoen Cecilia Rakgoale Kevin Homu Tshepo Mofokeng Hannes Dednam Dawie Maree Themba Tshabalala S'busiso Dlamini Bheki Sethebe
Workshop 2	Finance, Strategy and Corporate Planning, Environmental Resource Management, Human Settlements, EPMO, Real Estate and City Planning	03 November 2015	Pieter Swanepoel, Carmen Paulsen Wayne Maluleke Nokwazi Ndlela Lovedalia Selabe Lilian Kwakwa Godfrey Hiliza Cecilia Rakgoale Kevin Homu Tshepo Mofokeng Hannes Dednam Dawie Maree Themba Tshabalala Pieter Grobler S'busiso Dlamini Bheki Sethebe

Outcomes:

The CIF/Budget evaluation sessions afforded the Operational Task Team the opportunity to evaluate the draft multi-year capital budget against set criteria, which included the evaluation of the capital projects against alignment with the CIF geographic priority areas. The key departments flagged projects that were outside of the CIF priority areas, inconsistencies with the mapping information, projects with multiple locations but under one vote number, budget allocation inquiries, EIA compliance, project status (planning and readiness), current commitments, and alignment of project initiatives. These matters were captured for redress with the affected departments.

d. Departmental Capital Budget Evaluation: Departmental One on One Sessions

Purpose: To provide departments an opportunity to clarify or motivate their budget submissions and to indicate prioritization of their budget submissions

Objective:

The joint sitting of the Operational Task Team for the CIF/Budget evaluation was followed on by the one on one departmental sessions as was held from 4 to 11 November 2015. The one on one sessions with departments afford the Operational Task team the opportunity flag points of concern, highlight issues for redress and obtain clarity from the responsible project leaders as was identified during the CIF/Budget evaluation. In turn project leaders were afforded the opportunity to defend and motivate capital project budget submissions or negotiate workable change

Workshop dates and attendance of the Departmental ONE ON ONE SESSIONS WITH DEPARTMENTS - 2016/17 - 2018/19 Multi - year capital budget:

SESSION 1 - DEPARTMENTS REQUIRED	**TIME**	**DATE**	**VENUE**	**Attendees**
Human Settlements	9:00 - 10:30	**4-Nov-15**	City Planning Corporate Office, Kempton Park (**Front** Boardroom)	Robert van Dyk, Tandaza Ntikinca, Xolisani Galada, Funani Matlatsi, Fikile Ndlovu, Godfrey Hiliza
Water and Sanitation	10:45 - 12:30			Kennedy Chihota, Thokozani Maseko, Edwin Morulane
Roads and Stormwater	13:00 - 15:00			Marius van Hyssteen, Kabelo Makgaka, Nape Seopela, Nico nell, Barend Bominey
SESSION 2 - DEPARTMENTS REQUIRED	**TIME**	**DATE**	**VENUE**	**Attendees**
Economic Development	11:15 - 12:30			Zanele Shabalala, Caiphus Netshishivhe, Paki Mathebula
CRM	12:30 - 13:00			Glynis Leslie, Edwin Mokgatswana,
Real Estate				Mabela Jonathan, Anton van Wyk, Pieter Grobler, Vusi Magagula, Ron Naicker, Thapelo Mmusinyane
SESSION 3 - DEPARTMENTS REQUIRED	**TIME**	**DATE**	**VENUE**	**Attendees**
SRAC	9:00 - 10:30			Rico reyneke,
Health and Social Development	10:45 - 12:00			Jaco Brits, Michael Diale
EMPD	12:00 - 13:00			Jabu Dhladlha, Madeline Bloemhof
Energy				**S**erutle Ntlantleng
SESSION 4 - DEPARTMENTS REQUIRED	**TIME**	**DATE**	**VENUE**	**Attendees**
Real Estate	9:00 - 10:30			
Environmental Resource Management	10:45 - 12:00			Patricia Sithebe, Neline Swanepoel, Victor Nesengani, Renier Cooper, Mophete Ramonate
Fleet Management	12:00 - 13:00			Obed Nhlapo,Gladwin Modise, George Maswuma, Vusi Qwabe
Human Settlements	14:00 - 16:00			Bongani Molefe, Funani Matlatsi,Robert van Dijk, Miemie von Maltitz
SESSION 5 - DEPARTMENTS REQUIRED	**TIME**	**DATE**	**VENUE**	**Attendees**
Waste	9:00 - 10:30			Samuel Manyatshe, Siphamandla

Management				Masondo,
Disaster and Emergency Services	10:45 - 12:15			Sam Sibande, Buzwe Bixa, Xolani Sibiya, Emmanuel Hakanga
SESSION 6 - DEPARTMENTS REQUIRED	**TIME**	**DATE**	**VENUE**	**Attendees**
Transport	9:00 - 10:30			Thomas Chongo, Dorothy Mabuza, Thomas Sema
ICT	10:45 - 12:00			Liaan de Witt, Portia Matsena
Real Estate				Nandi Khumalo, Siphiwe Ndlela
Close out - Operational Task Team	12:00 - 13:00			Pieter Swanepoel, Carmen Paulsen Wayne Maluleke Nokwazi Ndlela Lovedalia Selabe Lilian Kwakwa Godfrey Hiliza Cecilia Rakgoale Kevin Homu Tshepo Mofokeng Hannes Dednam Dawie Maree Themba Tshabalala Pieter Grobler Bheki Sethebe

Outcomes:

The Operational Task Team was afforded the opportunity to address matters of concern identified during the CIF/Budget evaluation process with the relevant departmental project leaders. On the part of departmental attendance, the one on one departmental sessions were well attended and the process flowed with interactive discussions with the departments. All the required departments attended the sessions. Attendance and involvement of the Operational Task Team members was well-attended with the exception of the Economic Development Department. The sessions were overall an interactive and transparent process. The process yielded in certain circumstances that departmental project leaders needed to breakdown large vote numbers (especially where multiple localities were mapped under one vote), alignment of the budget with project readiness, and to meet with other affected departments on matters relating to project alignment.

4. PURPOSE OF THE ANALYSIS

The purpose of the analysis is based on assessing the outcome of the CIF requirements as part of the budget evaluation process in identify achievements in the alignment of the multi-year capital budget with the CIF project categories derived from the Capital Prioritisation Model and the geographic priority areas that give directive to the spatial strategy of the EMM.

This section of the report will outline the methodology followed in the analysis process and the outcome findings of the CIF evaluation process.

a. Methodology

In testing the outcomes of the CIF budget evaluation process on the multi-year capital budget in achieving increased alignment with the CIF the following process was followed:

- The draft 2016/17 to 2018/19 multi-year capital budget spreadsheet was utilized as the base data for the analyses.
- The following data outcomes have been identified to inform the impact of the CIF budget evaluation process:
    - List of projects that were removed and/or moved to the outer years of the MTREF;
    - Budget % per priority area over the MTREF period;
    - Budget % per CIF project category pre and post evaluation
    - Budget % per CIF project category and per geographic priority area for 2016/17
    - Impact on project scoring based on the revised CPM weighting system
    - Utilization of maps, tables and graphs to illustrate findings

- The draft multi-year spreadsheet was populated by the GIS to include the unique GIS codes per project and geographic priority area code based on the mapping data provided by departments. The evaluation against the priority areas is based on 6 locality codes defined as followsL

    1 = Priority Area 1

    2 = Priority Area 2

    3 = Priority Area 3

    4 = Outside of a Priority Area

    5 = Outside of the Urban Edge

0 =Unmapped (No locality available or no geo-referencing information provided)

- The draft 2016/17 to 2018/19 multi-year capital budget spreadsheet was further reviewed to ensure more accuracy in the data sets that would be utilized for analysis. The following information was re-assessed in the draft multi-year capital budget spreadsheet as was provided by the departments with capital projects for the MTREF period:

    - The accuracy of the CIF project category allocated per project was assess and changes highlighted in red. The project categories as illustrated in **Diagram 1** is summarized as follows:

Urban Restructuring –

- Eradication of Historical Backlogs (Physical Infrastructure): Eradication of Infrastructure for existing backlogs.
- Eradication of Historical Backlogs (Social Facilities): Eradication of Infrastructure for existing backlogs.

Upgrading and Renewal –

- Renewal of Existing Assets: Remaining useful life is extended due to aging of infrastructure. This does not mean the capacity is extended.
- Upgrading of Existing Assets – to extend existing bulk capacity: To extend bulk capacity purely for existing network.

Economic Development –

- Upgrading of Existing Assets – to stimulate new Economic Growth: To extend bulk purely for new development where growth will be stimulated.
- Income Generating: Purely Income Generating Projects.

The CIF categories are based on definitions that were derived by National Treasury and are used to demarcate projects for the purpose of assisting municipalities to determine the budget % allocation per category.

- The number of projects that were mapped versus the number of projects that could not be mapped.
- GIS was requested to map and allocate GIS codes for new shape-files for all projects that were not mapped as part of the mapping sessions, but for which a locality had been provided in the budget spreadsheet. Approximately a total of number **293** projects could not be mapped out

of a total of **1748** projects, which derives an approximate 83% accuracy in the findings based on number of projects mapped for the evaluation process. The mapped projects were run through the GIS to determine the projects locality in relation to the geographic priority areas.

- It must be noted that there are still approximately **435** projects that do not have a unique GIS key allocation. These projects comprise predominantly of projects that have been unbundled at the last minute and projects that do not have a locality.

5. ANALYSIS OF FINDINGS

5a. Analysis based on the CIF project categories

Diagram 3a: Pre Evaluation - Sum of CIF Revised Budget 2016/17

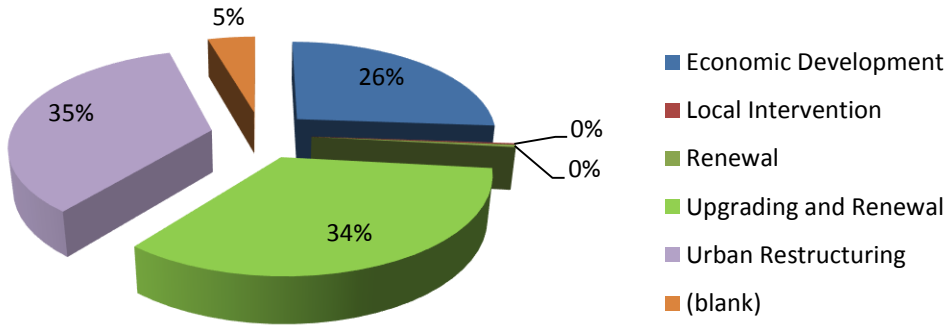


Diagram 3b: Post Evaluation - Sum of CIF Revised Budget 2016/17

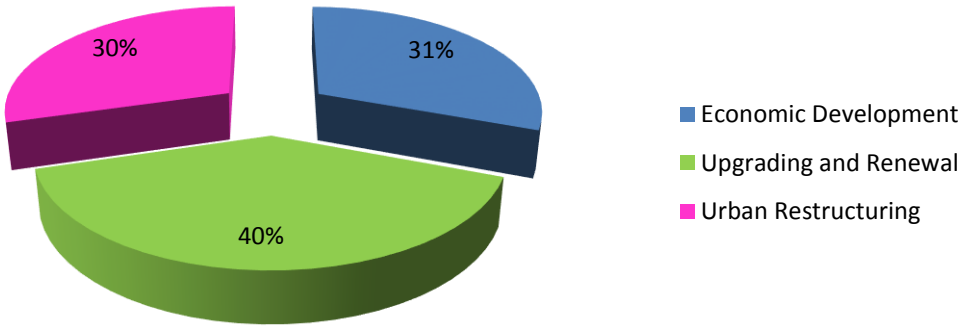
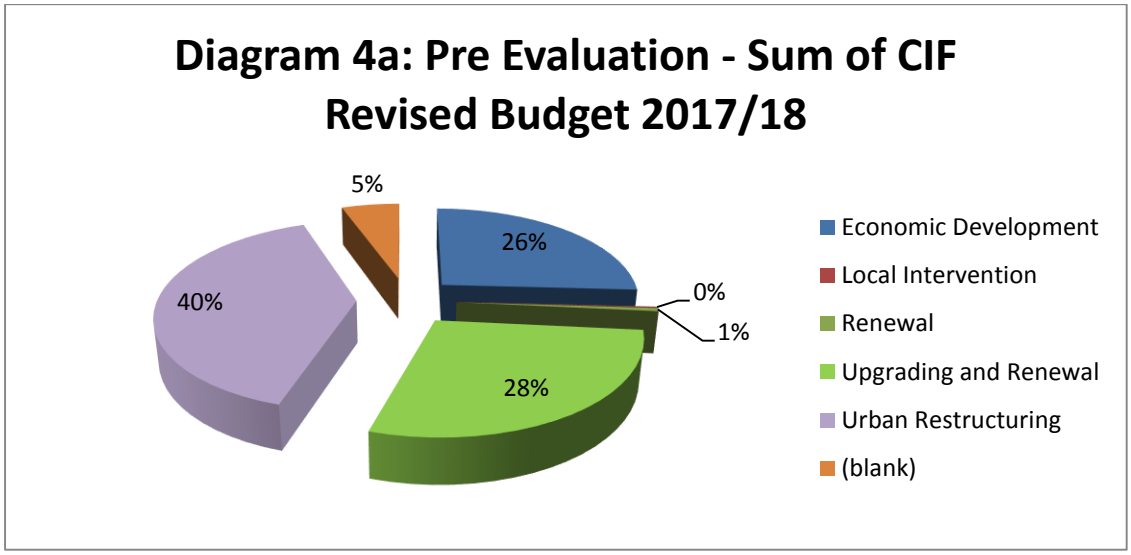


Diagram 3a reflects the project categories pre CIF evaluation of the project categories for 2016/17, and where diagram 3b reflects the project categories post CIF evaluation. The comparison yields no change in the 26% allocation for economic development, an increase in the upgrading and renewal (Includes projects labelled renewal) budget percentage allocation from 34% pre evaluation to 40% post evaluation; and an increase in the budget percentage allocation from 35% pre evaluation to 30% post evaluation for Urban Restructuring projects. The pre evaluation also reflected a 5% budget allocation to projects for which no project category allocation had been completed. The CIF evaluation assessed these projects against the national treasury definitions for allocation of the categories and to permit a comprehensive assessment of the categories against the entire budget.



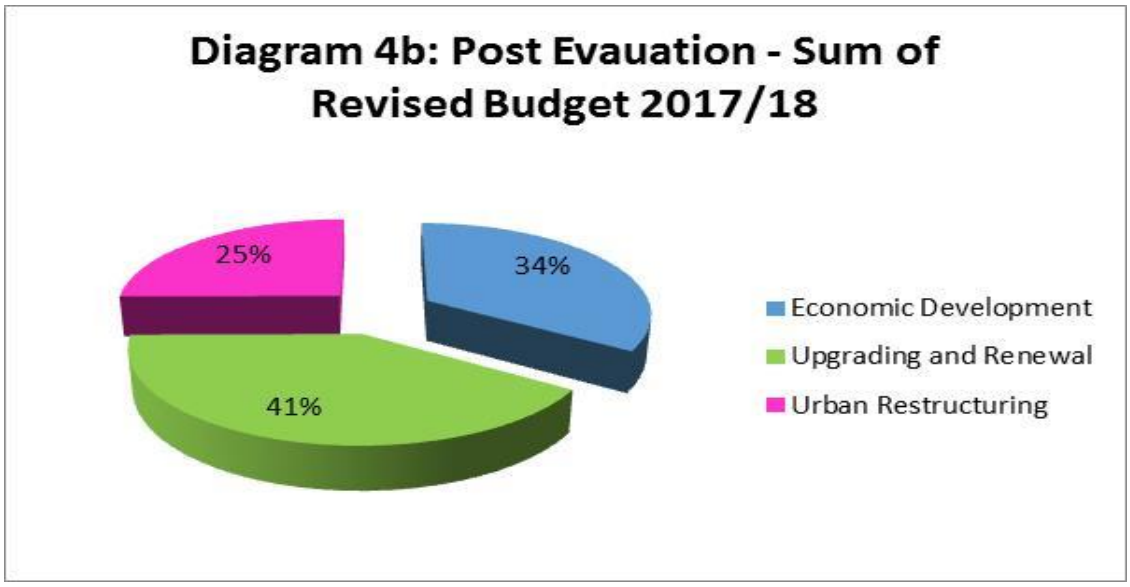
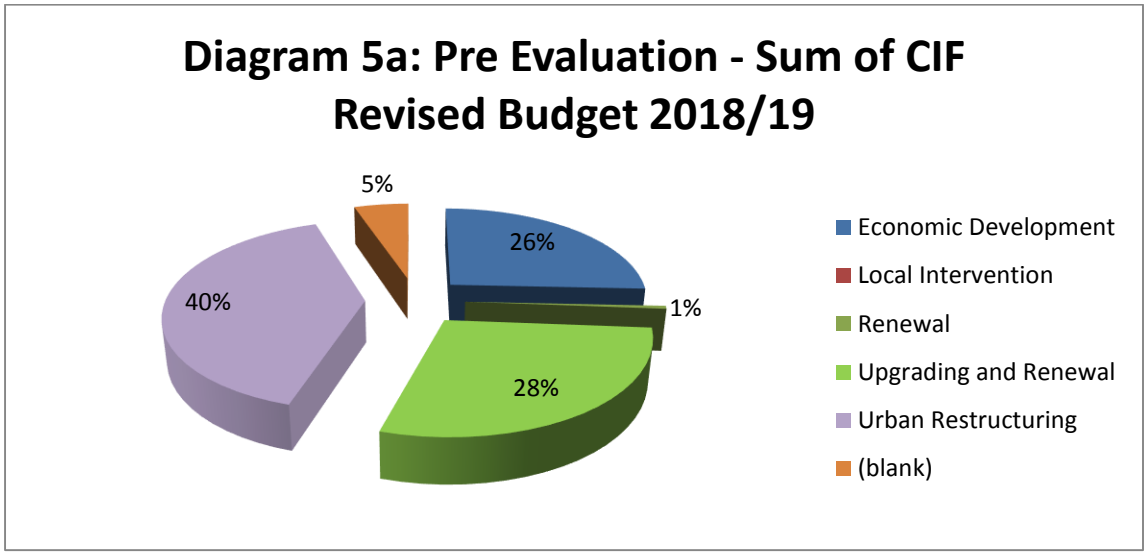


Diagram 4a reflects the project categories pre CIF evaluation of the project categories for 2017/18, and where diagram 4b reflects the project categories post CIF evaluation. The comparison yields a change in the 26% allocation for economic development to 34%, an increase in the upgrading and

renewal (Includes projects labelled renewal) budget percentage allocation from 28% pre evaluation to 41% post evaluation; and a decrease in the budget percentage allocation from 40% pre evaluation to 25% post evaluation for Urban Restructuring projects. The pre evaluation also reflected a 5% budget allocation to projects for which no project category allocation had been completed. The CIF evaluation assessed these projects against the national treasury definitions for allocation of the categories and to permit a comprehensive assessment of the categories against the entire budget.



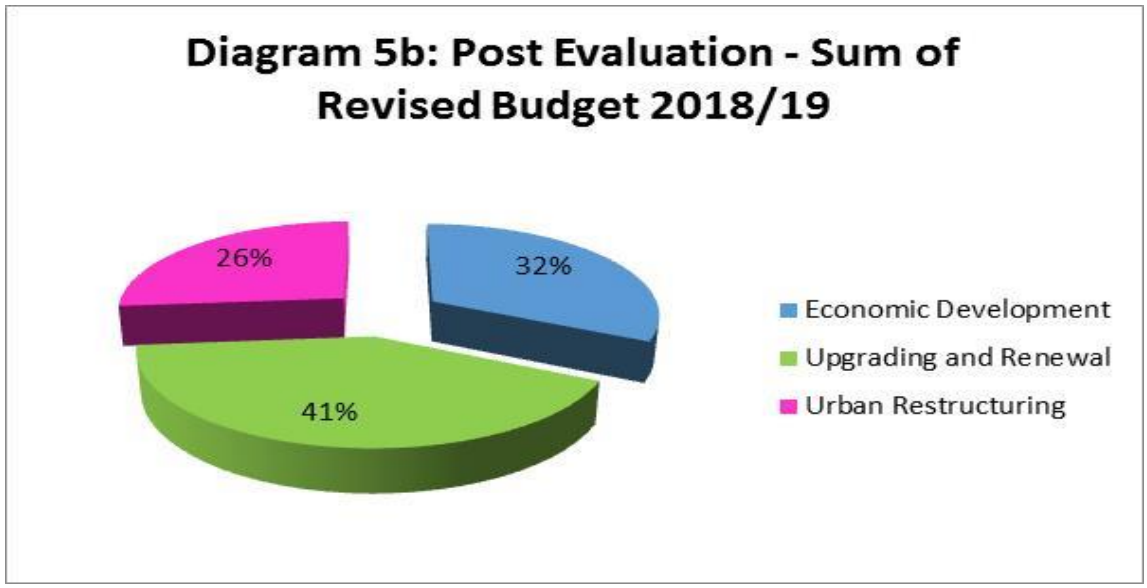


Diagram 5a reflects the project categories pre CIF evaluation of the project categories for 2018/19, and where diagram 5b reflects the project categories post CIF evaluation. The comparison yields an increase in the 26% allocation for economic development to 32%, an increase in the upgrading and renewal (Includes projects labelled renewal) budget percentage allocation from 29% pre evaluation to 41% post evaluation; and a decrease in the budget percentage allocation from 40% pre evaluation to 26% post evaluation for Urban Restructuring projects. The pre evaluation also reflected a 5%

budget allocation to projects for which no project category allocation had been completed. The CIF evaluation assessed these projects against the national treasury definitions for allocation of the categories and to permit a comprehensive assessment of the categories against the entire budget.

Table 1: Percentage of Budget Allocation across the Project Categories over the MTREF Period

Capitalisation Investment Framework Category	MTREF Budget 2016/17	%	MTREF Budget 2017/18	%	MTREF Budget 2018/19	%
Economic Development	R 1 570 889 000	31%	R 1 998 244 000	34%	R 2 014 744 000	32%
Upgrading and Renewal	R 2 044 696 075	40%	R 2 400 841 270	41%	R 2 599 981 471	41%
Urban Restructuring	R 1 515 376 362	30%	R 1 475 341 161	25%	R 1 654 554 487	26%
Total	**R 5 130 961 437**	**100%**	**R 5 874 426 431**	**100%**	**R 6 269 279 958**	**100%**

In an overall assessment of the budget allocation for the project categories across the MTREF period post CIF evaluation (Table 1) it is noted that the budget allocation whilst increases, deviates from its budget allocation of 31% to 34% in 2016/17 to 32% in 2018/19. Upgrading an renewal which should be retained at a budget percentage allocation of 40% as per National Treasury requirements, fluctuates from a budget allocation of 40% in 2016/17 to 41% in 2017/18 and in the 2018/19 financial year. The urban restructuring category reflects a budget allocation of 30% in 2016/17 and sees a decrease in 2017/18 to 25%, and a decrease in the budget allocation down to 26% in the 2018/19 financial year. The percentage of budget allocation for urban restructuring and upgrading and renewal respectively reveals some volatility in the budget allocation across the MTREF period for these project categories. The Findings also yield the need to increase the budget allocation for economic development projects.

5b. Analysis based on the CIF geographic priority areas

Diagram 7: Percentage of Budget Allocation for the CIF Geographic Priority Areas over the MTREF Period

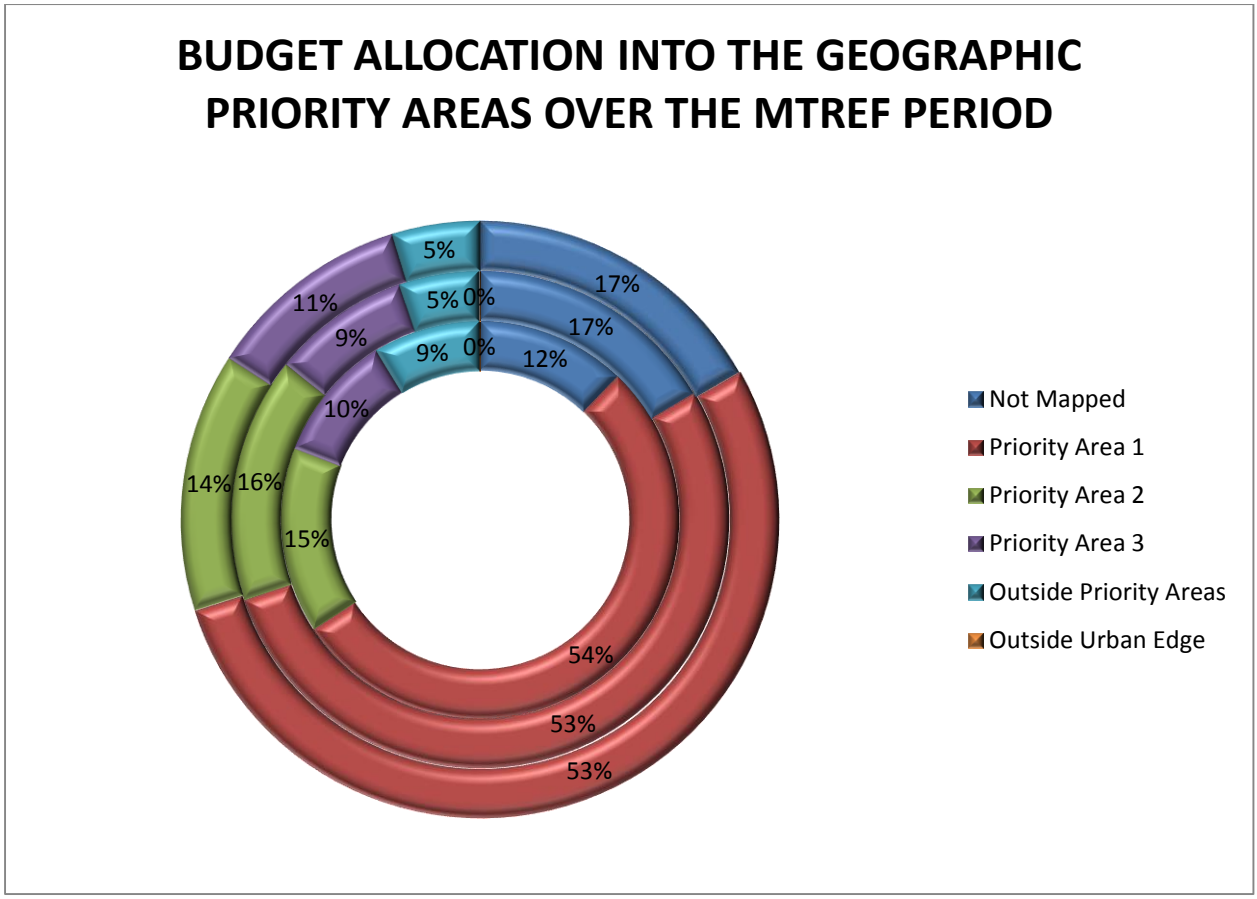


Table 2: Percentage of Budget Allocation for the CIF Geographic Priority Areas over the MTREF period, including the 2015/16 Financial Year

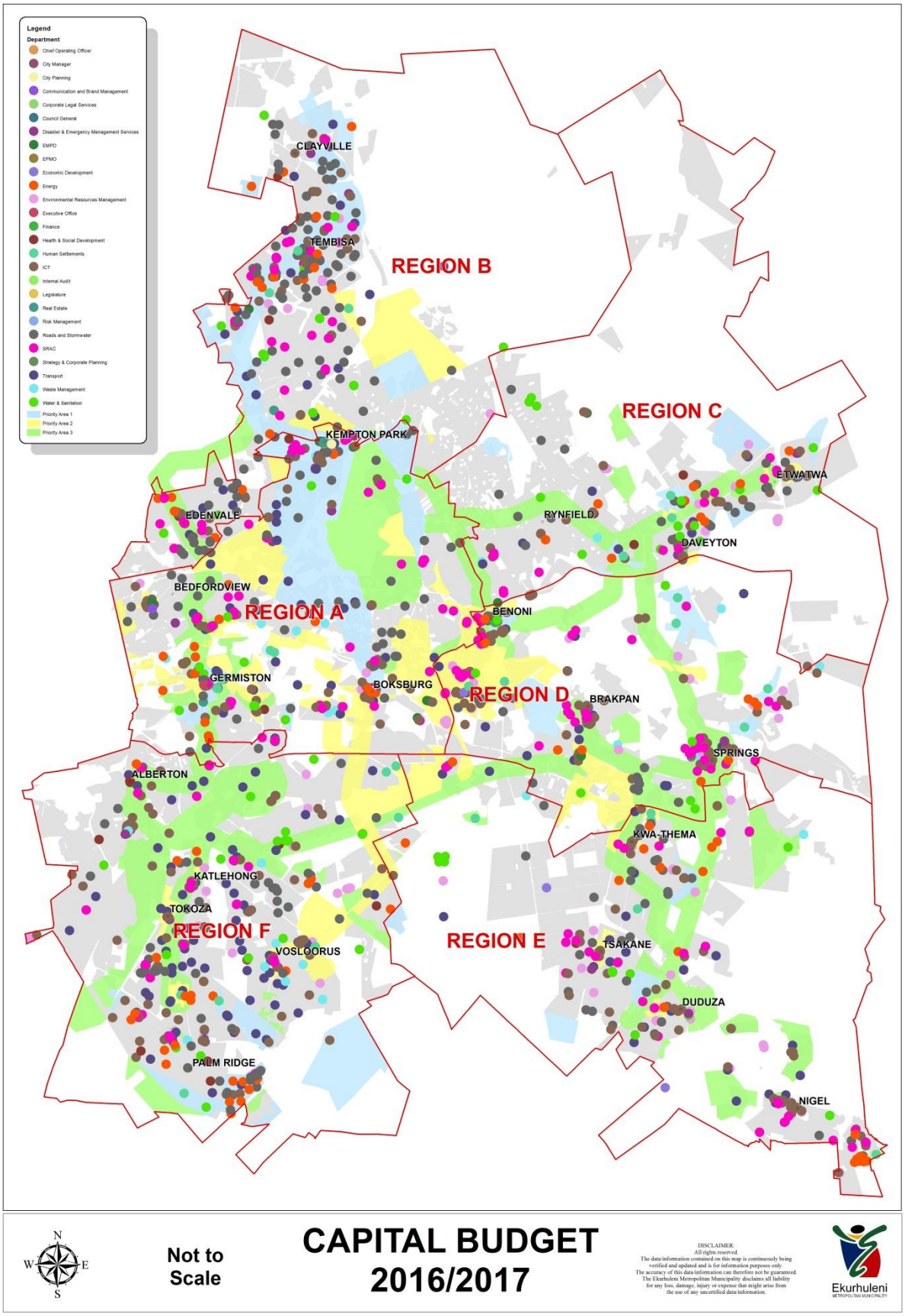
PRIORITY AREAS	2014/15	2015/16	2016/17	2017/18	2018/19
PRIORITY AREA 1		57%	54%	53%	53%
PRIORITY AREA 2		16%	15%	16%	14%
PRIORITY AREA 3		13%	10%	9%	11%
OUTSIDE OF THE PRIORITY AREAS (4)		8%	9%	5%	5%
OUTSIDE OF THE URBAN EDGE (5)		0%	0%	0%	0%
UNMAPPED (0)		6%	12%	17%	17%
TOTAL:		100%	100%	100%	100%

Diagram 7 as read in conjunction with table 2 provides an overview of the budget percentage allocation for capital projects based on the projects allocation in alignment with the CIF priority areas.

Geographic priority area 1 yields the highest budget allocation across the MTREF period with a budget allocation of 54% on 2016/17 and a subtle 1% decline in budget allocation down to 53% in 2017/18 and 53% in 2018/19. It must be noted that the percentages should be viewed proportionally to the total rand budget allocation per financial year. Priority area 2 receives the second highest budget percentage allocation across the MTREF period, which is followed by priority area 3 with subtle percentage increases towards the outer financial years. The budget allocation for projects outside of the priority areas reveals a slight percentage decline in the budget allocation. The increase in budget allocation for the unmapped projects in the 2018/19 financial year is indicative of lack of sufficient locality information for projects to be rolled out or for commencement in the outer financial year. A comparison between the 2015/16 financial year and the 2016/17 to 2018/19 MTREF period yields a steady cons*i*stency in the budget allocation across all four financial years within the priority areas. In terms of the CIF priority areas the evaluation process is rendering positive results in facilitating increased investment amongst departments within the priority areas and in alignment with the phasing of the priority areas as per the GDS.

Map 2 demonstrates the draft multi-year capital budget spatially after the CIF budget evaluation process. Capital projects are depicted per department and in term of where the projects is proposed for implementation in the spatial context of the EMM.

MAP 2: MAPPING OF DEPARTMENTAL CAPITAL PROJECTS FOR THE 2016/17 FINANCIAL



5c. Analysis of budget per CIF project category and per geographic priority area

Diagram 8: Analysis of budget per CIF project category and per geographic priority area for 2016/17

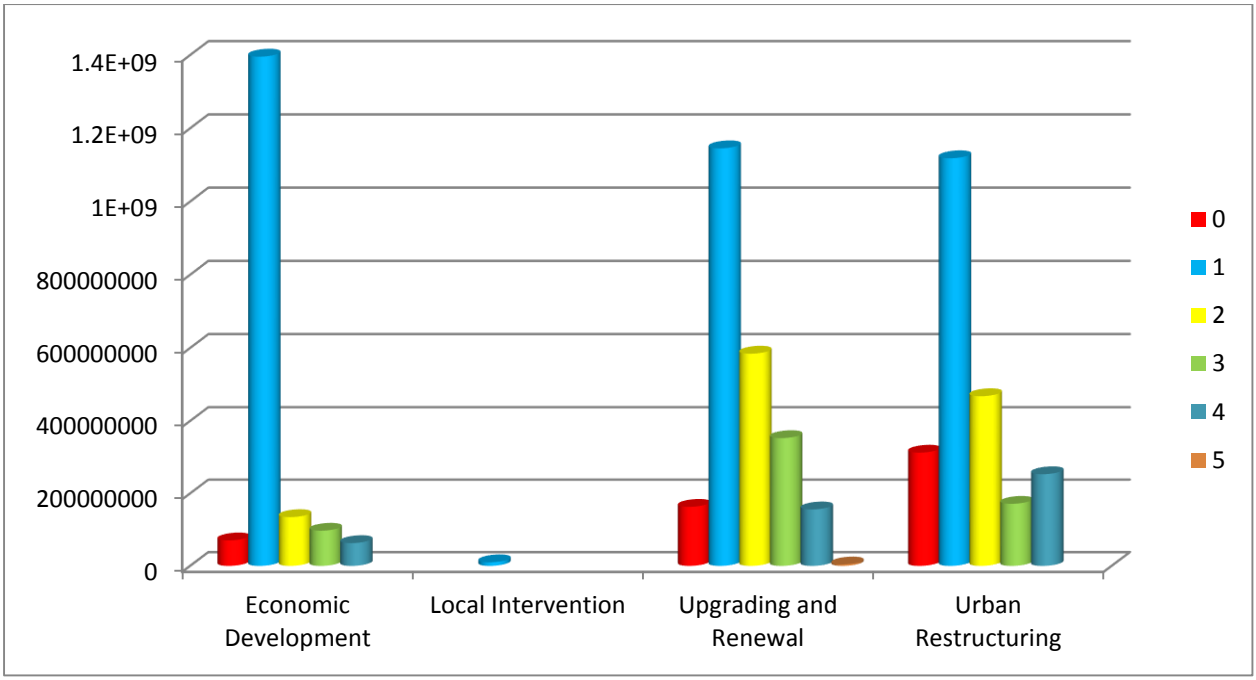


Diagram 8 reflects the percentage of budget allocation per priority area per project category for the 2016/17 financial year. The assessment reveals that the highest proportion of budget allocation for economic development, upgrading and renewal and urban restructuring falls within priority area 1. The diagram also illustrates high budget allocations in priority area 2 for both upgrading and renewal and urban restructuring projects. Similarly, priority area also reflects higher budget allocations for both upgrading and renewal and urban restructuring projects. Urban restructuring projects are also noted to be inclined to derive from projects that fall outside of a priority area.

5d. Further Refinement of the Draft Multi-Year Budget

In terms of National Treasury Form SA 36 departments are required to provide a projects locality. Projects that are not in pre-feasibility stage and are in a process of implementation should be able to provide accurate locality information for mapping purposes. Projects that do not have an allocated locality should not be supported.

6. CONCLUDING REMARKS

The CIF budget evaluation process as guided in part by the steps of the CIF Capital Prioritization Model makes allowance for the budget evaluation process to be applied as a collaborative and transparent process, which has been formalized through the establishment and enactment of the Operational Task Team as supported in terms of the resolution from the City Managers Workgroup minutes dated 7 August 2014.

Collaboration and transparency of the budget evaluation is achieved through the following platforms as part of the process:

- Provision of capital projects locality for mapping purposes;
- Release of the budget instruction letter – communicating draft budget submission requirements (Including requirements in terms of the IDP and CIF);
- Operational Task Team Evaluation of the consolidated draft budget that comprised of a panel of professionals in providing a comprehensive overview in the evaluation process.
- Departments to addressed the budget evaluation panel on a one on one basis to afford departments the opportunity to provide clarity and or defend queried budget submissions.

Mapping of capital projects as a requirement in terms of National Treasury Form SA36 is supported in the CIF evaluation process through the provision of GIS mapping support workshops for departments before submission of the draft budgets, and again directly after the departmental one on one engagements. Pre the CIF budget evaluation a total of 666 projects out of 1358 projects still required mapping. During the one on one departmental engagement the task team identified global votes for unbundling and projects for mapping. The outcome result was firstly a move from 1358 projects to 1748 (Global votes and unbundled projects) projects as a result from additional unbundling provided by the departments. The second positive was a marked decrease in the number of unmapped projects from 666 to 293 despite the increase in the total number of projects. The objective still remains to obtain 100% mapping of the capital budget and to enforce greater accuracy in the mapping information provided. This will include having a locality provided per unbundled project, curbing projects from being mapped to general localities as in the case of mapping to a corporate office or to a region. Mapping in future must also be accompanied with a projects level of service (i.e. area/townships to benefit directly from the service). Based on assessment of the final budget with the inclusion of additional mapping information provided as a result of the departmental one on one engagements and further mapping verification through the City Planning GIS division, the percentage of mapped projects improved to 85% of the capital budget projects being mapped on assessment of the geographic priority area allocation column within the multi – year capital budget spreadsheet.

The assessment of the draft multi-year capital budget post the CIF evaluation has yielded positive results with regard to the budget allocation split across the priority areas. On average as taken across the MTREF period 54% of the budget is planned for expenditure on capital projects within the CIF geographic priority area 1. This starts to reflect support in achieving spatial targeting in alignment with the metros spatial vision and GDS development trajectory. On average across the MTREF period the second highest budget allocation falls within geographic priority area 2. An

average budget allocation of 15% lies with projects for which no locality information has been provided. Overall the budget allocation split across the priority areas through the evaluation process has yielded positive results with steady and relatively constant budget allocations being reflected for the priority areas.

The project categories namely economic development, upgrading and renewal, and urban restructuring are defined by National Treasury, and whereby National Treasury requires a 40% budget allocation for the upgrading and renewal category. Post evaluation results revealed an increase in the upgrading and renewal budget allocation from 34% to 40% for the 2016/17 financial year. The urban restructuring category post evaluation for 2016/17 also revealed a budget allocation of 35%, and a 30% budget allocation for economic development projects. The urban restructuring category post evaluation also decreases to 25% in 2017/18 and 26% in 2018/19, whilst the upgrading and renewal projects increased to 41% in 2017/18 and 2018/19. This indicated that the collective budget allocation for the upgrading and renewal projects remain at the 40% budget allocation target set by National Treasury. The budget post evaluation figures in terms of economic development projects reveals a marked increase in the budget percentage allocation for this category from 26% pre – evaluation to 31% in 2016/17, 34% in 2017/18 and 32% in 2018/19 post evaluation process. The marked increase in the budget allocation for economic development projects in the multi-year capital budget is a marked achievement for the CIF/budget evaluation process.

Further assessment of the budget allocation split per the CIF project categories and per the project categories as yielded high budget allocation for geographic priority area 1 as viewed proportionally to the budget allocation per project category.